

104(e) Response Update
Portland General Electric – Harborton (August 6, 2012)

EPA Question	Response	Records/Information Available
Section 1.0 - Respondent Information		
1. Provide the full legal, registered name and mailing address of Respondent.	Portland General Electric Company 121 SW Salmon Street Portland, OR 97204	
2. For each person answering these questions on behalf of Respondent, provide:		
Site Owner/Operator: Portland General Electric		
a. full name;	Arya Behbehani	
b. title;	Manager, Environmental Services	
c. business address; and	121 SW Salmon Street m/s 3WTCBR05 Portland, OR 97204	
d. business telephone number, electronic mail address, and FAX machine number.	Business Telephone Number: 503-464-8141 Electronic Mail Address: Arya.Behbehani@pgn.com Fax Number: 503-464-8527	
Site Consultant: URS Corporation		
a. full name;	David Weatherby, RG; Anne Gire	
b. title;	Senior Project Manager; Environmental Scientist	
c. business address; and	111 SW Columbia, Suite 1500 Portland, OR 97225-5850	
d. business telephone number, electronic mail address, and FAX machine number.	Business Telephone Number: 503-222-7200 Electronic Mail Addresses: David.Weatherby@urs.com; Anne.Gire@urs.com Fax Number: 503-222-4292	
3. If Respondent wishes to designate an individual for all future correspondence concerning this Site, please indicate here by providing that individual's name, address, telephone number, fax number, and, if available, electronic mail address.	Arya Behbehani Portland General Electric Manager, Environmental Services 121 SW Salmon Street - 3WTCBR05 Portland, OR 97204 Telephone Number: 503-464-8141 Fax Number: 503-464-8527 Electronic Mail Address: Arya.Behbehani@pgn.com	

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Section 2.0 - Owner/Operator Information		
<p>4. Identify each and every Property that Respondent currently owns, leases, operates on, or otherwise is affiliated or historically has owned, leased, operated on, or otherwise been affiliated with within the Investigation Area during the period of investigation (1937 to Present). Please note that this question includes any aquatic lands owned or leased by Respondent.</p>	<p>Portland General Electric Company (PGE) has prepared separate 104(e) responses for properties within the Investigation Area. This response only applies to the Harborton Substation, (located at 12500 NW Marina Way, Portland, Oregon 97231) and nearby PGE-owned parcels.</p> <p>These are referred to herein as Parcels A through H, and are described as follows:</p> <p><u>Currently Owned Parcels</u></p> <p>Parcel A – approximately 63.1 acre developed parcel that includes the Harborton Substation</p> <p>Parcel B – approximately 10.7 acre undeveloped, vegetated parcel north of the Harborton Substation</p> <p>Parcel C – approximately 1.2 acre parcel with transmission lines, a historical 14” fuel pipeline southeast of the Harborton Substation, and a submerged electrical cable terminus</p> <p>Parcel D – approximately 0.1 acre parcel with transmission lines southeast of the Harborton Substation</p> <p>Parcel E – approximately 0.1 acre parcel with cable terminal on west side of the Willamette River</p> <p>Parcel F – approximately 0.4 acre parcel with cable terminal and electric transmission lines located on the east side of the Willamette River</p> <p>Parcel G – approximately 1.4 acre parcel with switching anchors southwest of the Harborton Substation</p> <p><u>Historically Owned Parcel</u></p> <p>Parcel H – approximately 0.06 acre parcel with transmission lines southeast of Harborton Substation</p> <p>As defined herein, “the Harborton parcels” refer to all seven currently owned parcels (Parcels A through G), whereas “Harborton Substation” refers exclusively to Parcel A. Please note that many other types of activities occur or historically occurred on Parcel A, in addition to the operation of the Harborton Substation. Furthermore a large portion of Parcel A was never developed for any type of activity. However, for the purposes of this 104(e) response, the term “Harborton Substation” generally refers to Parcel A.</p> <p>In 1973, PGE was granted permits from BPA and the Olympic Pipeline Company (OPLC) to construct a portion of the PGE railroad spur across the BPA property, along the OPLC pipeline easement, connecting the PGE spur to the Burlington Northern Inc. (BNI) railroad. From 1973 to 2003, BPA granted PGE permits/easement through the OFTG for an underground pipeline connecting the former aboveground storage tanks (ASTs) at to the dock at Georgia Pacific (GP). The PGE pipeline easement and railroad spur through the OFTG were located in areas of</p>	

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	contaminated soil.	
g. Historically Has Operated	<p>Between 1971 and 1973, PGE approached GP about modifying the GP docking facility, located south of the Harborton Substation, to enable PGE to install a ship-to-shore petroleum transfer and piping facility for the purpose of fuel delivery and offloading between ships and barges at the GP dock and the former ASTs (Parcel A). GP granted PGE permission to begin construction modifications in 1973. PGE dock modifications were designed by Swan Wooster (contractor that GP used to originally design dock) and were performed by Copenhagen General Contractors, with oversight by Ebasco. See the attached documents (Q04g_1973-05-09 Ebasco-SW Fuel Facility.pdf, Q04g_1973-05-16 DM-SW Vertical Capacity.pdf, Q04g_1973-05-21 SW-PGE Feasability Study.pdf, Q04g_1973-08-09 PGE-GP Communication.pdf, Q04g_1973-10-03 Ebasco-SW Fuel Facility Design.pdf, Q04g_1973-10-09 SW-PGE Revised Proposal.pdf, Q04g_1973-10-12 Ebasco-SW Valves.pdf, Q04g_1973-10-12 Ebasco-SW Valves.pdf, Q04g_1973-10-29 GP-PGE Permit to Install.pdf, Q04g_1973-11-02 PGE-GP GP Pier Operations.pdf, Q04g_1973-12-06 SW Prelim Diagram.pdf, Q04g_1973-12-18 GP-PGE Const Auth.pdf, Q04g_1973-12-31 PGE-Ebasco Facility Mod.pdf, Q04g_1974-01-08 PGE Facility Satus.pdf, Q04g_1974-02-01 SW-PGE Derrick Orient.pdf, Q04g_1974-02-19 PGE-GP Barge Unloading.pdf, Q04g_1974-02-28 PGE-GP Construct Agrmt.pdf, Q04g_1974-03-01 Add Derrick Plat.pdf, and Q04g_1974-03-28 PGE-Radar Barge Specs.pdf).</p> <p>The modifications to the GP dock were performed by PGE/PGE's contractor under GP's construction and dredging permits. See the attached documents (Q04g_1971 COE dredge Permit.pdf, Q04g_1971-04-14 DSL-GP Dredge Removal Permit.pdf, Q04g_1972-01-06 GP-COE Dredge Permit Mod.pdf, Q04g_1972-01-13 dredging authorization.pdf, Q04g_1973-10-08 PGE USACE Comm Notes.pdf, Q04g_1973-11-26 GP-USACE Fuel System Req.pdf, Q04g_1973-12-20 USACE-GP Facility Permit Mod.pdf) relating to the construction and dredging permits issued by the U.S. Army Corp of Engineers (USACE) and the Division of State Lands (DSL) to GP.</p> <p>On 2 May 1974 PGE provided the US Coast Guard with the operations manual for PGE's fuel transfer facility at the GP dock; see the attached document (Q04g_1974-05-02 USCG-PGE Operations Manual.pdf).</p> <p>On 29 May 1974, PGE signed the written use agreement with GP for the GP docking facility; see the attached document (Q04g_PGE-GP Fuel Transfer Agmt 1974.pdf). The terms of the agreement granted PGE the right to install and maintain a ship-to-shore petroleum transfer and piping facility on the GP dock for the purpose of fuel delivery/offloading from ships and barges at the GP dock.</p> <p>On 27 June 1974, PGE entered into a contract with Willamette Western Corp (also historically known as Willamette Tug & Barge Co and Western Pacific Dredging Co, and currently known as Riedel International Inc.) for oil containment services for PGE's fuel transfer facility operations</p>	<p>Question 4 Attachments</p> <p>Q04g_1971-04-14 DSL-GP Dredge Removal Permit.pdf Q04g_1972-01-06 GP-COE Dredge Permit Mod.pdf Q04g_1973-05-09 Ebasco-SW Fuel Facility.pdf Q04g_1973-05-16 DM-SW Vertical Capacity.pdf Q04g_1973-05-21 SW-PGE Feasability Study.pdf Q04g_1973-08-09 PGE-GP Communication.pdf Q04g_1973-10-03 Ebasco-SW Fuel Facility Design.pdf Q04g_1973-10-08 PGE USACE Comm Notes.pdf Q04g_1973-10-09 SW-PGE Revised Proposal.pdf Q04g_1973-10-12 Ebasco-SW Valves.pdf Q04g_1973-10-12 Ebasco-SW Valves.pdf Q04g_1973-10-29 GP-PGE Permit to Install.pdf Q04g_1973-11-02 PGE-GP GP Pier Operations.pdf Q04g_1973-11-26 GP-USACE Fuel System Req.pdf Q04g_1973-12-06 SW Prelim Diagram.pdf Q04g_1973-12-18 GP-PGE Const Auth.pdf Q04g_1973-12-20 USACE-GP Facility Permit Mod.pdf Q04g_1973-12-31 PGE-Ebasco Facility Mod.pdf Q04g_1974-01-08 PGE Facility Satus.pdf Q04g_1974-02-01 SW-PGE Derrick Orient.pdf Q04g_1974-02-19 PGE-GP Barge Unloading.pdf Q04g_1974-02-28 PGE-GP Construct Agrmt.pdf Q04g_1974-03-01 Add Derrick Plat.pdf Q04g_1974-03-28 PGE-Radar Barge Specs.pdf Q04g_1974-05-02 USCG-PGE Operations Manual.pdf Q04g_1974-06-27 PGE-WWC Oil Cont Contract.pdf</p>

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h. Historically otherwise affiliated with	<p>at the GP dock; see the attached document (Q04g_1974-06-27 PGE-WWC Oil Cont Contract.pdf).</p> <p>From 1951 to 1988, the COP leased the OFTG property from BPA to train firemen to extinguish oil-based fires.</p> <p>In 1973, PGE was granted permits from BPA and the Olympic Pipeline Company (OPLC) to construct a portion of the PGE railroad spur across the BPA property, along the OPLC pipeline easement, connecting the PGE spur to the Burlington Northern Inc. (BNI) railroad. From 1973 to 2003, BPA granted PGE permits/easement to construct and maintain a 14-inch pipeline across the BPA-owned OFTG, south of the Harborton Substation (Parcel A) and Parcel C. The underground pipeline connected the former ASTs to the dock at GP.</p> <p>The use of the BPA property as an OFTG by the COP resulted in the release of petroleum hydrocarbons and chlorinated solvents at the OFTG. The PGE pipeline easement through the OFTG was within areas of contaminated soil.</p> <p>To the best of PGE's knowledge, after reasonable inquiry:</p> <ul style="list-style-type: none"> On 8 January 1973, BPA granted PGE a permit to construct a railroad spur through the OFTG; see the attached document (Q04h_1973-01-08 PGE-BPA Railroad Permit-missing.pdf). Please note that this document provides the cover letter for this transaction; however, PGE was unable to locate the permit. On 2 February 1973, OPLC and PGE entered into an agreement, whereby OPLC granted PGE permission to construct the railroad spur along their pipeline easement within BPA's OFTG; see the attached documents (Q04h_1973-02-02 OPLC-PGE Pipeline Agreement.pdf and Q04h_1973-02-16 PGE-OPLC Pipeline Auth.pdf). In February 1973, in order to install the railroad spur through the BPA property, a PGE contractor (Dale Pence General Contractors Inc.) relocated some of the OFTG facilities (water tank, propane tank, burning pit and associated piping) along the OPLC easement to other areas of the OFTG; see the attached document (Q04h_1973-02-02 PGE OFTG Contr for BPA RR.pdf). <p>For further details, see Q07_1992-01-29_COP Permit to CP.pdf and Q07_1992-02-19_COP permit to CP.pdf.</p> <ul style="list-style-type: none"> In June 2003, BPA terminated the PGE easement for the PGE pipeline and pipeline facilities; see the attached document (Q04h_2003-07-23_PGE to BPA.pdf). In addition, the attached document (Q04h_2003-07-09_DEQ to COP re OFTG.pdf) is a copy of a July 2003 letter from the Oregon Department of Environmental Quality (DEQ) to the City of Portland regarding the OFTG, which PGE has in its possession. 	<p>Question 4 Attachments</p> <p>Q04h_1973-01-08 PGE-BPA Railroad Permit-missing.pdf Q04h_1973-02-02 OPLC-PGE Pipeline Agreement.pdf Q04h_1973-02-02 PGE OFTG Contr for BPA RR.pdf Q04h_1973-02-16 PGE-OPLC Pipeline Auth.pdf Q04h_2003-07-09_DEQ to COP re OFTG.pdf Q04h_2003-07-23_PGE to BPA.pdf</p> <p>Also see Question 7 Attachment</p> <p>Q07_1992-01-29_COP Permit to CP.pdf Q07_1992-02-19_COP permit to CP.pdf</p>

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<p>5. Provide a brief summary of Respondent's relationship to each Property listed in response to Question 4 above, including the address, Multnomah County Alternative Tax lot Identification number(s), dates of acquisition, period of ownership, lease, operation, or affiliation, and a brief overview of Respondent's activities at the Properties identified.</p>		
<p>g. Activities</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the following activities occurred at the Harborton parcels (Parcels A through G) and the historically owned Parcel H:</p> <p><u>Harborton Substation (Parcel A) Activities</u></p> <p>In 1970-1971, the area for the Harborton facility was cleared and diked. In October and November 1971, PGE had the Port of Portland place 672,500 cubic yards of River dredge material within the diked portion of Parcel A for site development; see the documents (Q07_1971-12-22 POP Dredge Material Invoice.pdf, Q13k_1971-01-06 dredging fill placement memo.pdf, Q13k_Fall 1971_ 1st Diking and Fill Documents.pdf, Q13k_1973-06-15 Site Prep Chronology.pdf, and Q13k_1977-05 Harborton Chronology.pdf) attached in response to Questions 7 and 13k.</p> <p>Since Port of Portland was unable to provide the full amount of River dredge material needed for site fill, PGE had Willamette Western Corp (also historically known as Western Pacific Dredging Co and Willamette Tug & Barge Co, and currently known as Riedel International Inc.) place 113,790 cubic yards of dredge material within the diked portion of Parcel A in January and February 1972; see the documents (Q04g_1972-01-06 GP-COE Dredge Permit Mod.pdf, Q04g_1972-01-13 dredging authorization.pdf, Q07_1972 WWC Dredging & Fill Documents.pdf, Q13k_1972-12-18 Harborton Site Fill Authorization.pdf, Q13k_1973-06-15 Site Prep Chronology.pdf, and Q13k_1977-05 Harborton Chronology.pdf) attached in response to Questions 4g, 7, and 13k.</p> <p>PGE also had Crosswhite Excavating Inc. place 3,000 cubic yards of overburden fill from the GP property within the southwestern area of the diked portion of Parcel A in January 1972; see the documents (Q07_1972-01-12_Crosswhite Additional Fill.pdf and Q13k_1971-01-07 Sediment movement memo.pdf) attached in response to Questions 7 and 13k.</p> <p>The Harborton Substation is divided into eight areas, which are depicted in Figure 3 of the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.</p>	<p>Question 5 Attachment Q05g_1973-06-14 Harb Fact Sheet.pdf</p> <p>See Question 4 Attachments Q04g_1972-01-06 GP-COE Dredge Permit Mod.pdf Q04g_1972-01-13 dredging authorization.pdf</p> <p>Also see Question 7 Attachments Q07_1971-12-22 POP Dredge Material Invoice.pdf Q07_1972 WWC Dredging & Fill Documents.pdf Q07_1972-01-12_Crosswhite Additional Fill.pdf</p> <p>Also see Question 13 Attachments Q13k_1971-01-06 dredging fill placement memo.pdf Q13k_Fall 1971_ 1st Diking and Fill Documents.pdf Q13k_1971-01-07 Sediment movement memo.pdf Q13k_1972-12-18 Harborton Site Fill Authorization.pdf Q13k_1973-06-15 Site Prep Chronology.pdf Q13k_1977-05 Harborton Chronology.pdf</p> <p>Also see Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf Q15_2010-07-26 Sampling and Site Photos.pdf Q15_2010-06-15_Sampling Photos.pdf Q15_1998-08-27 Water Data.pdf</p>

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	<p>Activities at Harborton Substation (Parcel A) can be separated into four general categories:</p> <ol style="list-style-type: none"> 1) Waste handling and 2) Recent site deconstruction and removal activities. <p>A series of photographs taken on 1 April 2009 documents the site and the site activities in early 2009; see the attached document (Q05g_Harborton – Photo Log.pdf). A series of photographs taken in late 2009, early 2010, and late 2010 document the more recent site activities, including the deconstruction of the ASTs, removal of fuel piping, and removal of the oil-filled electrical equipment from the East and West Storage Yards; see the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.</p> <p><u>Former Generating Plant/East Equipment Storage Yard</u> The attached document (Q05g_1973-06-14 Harb Fact Sheet.pdf) provides a 1973 fact sheet on the Harborton facilities. The Generating Plant was dismantled in 1985 and sold/removed in 1986.</p> <p>From 2002 to December 2009, non-leaking surplus (used) equipment with < 50 ppm PCBs was stored in this area. Between October and December 2009, the majority of the oil-filled electrical equipment (i.e., large transformers and capacitors) were removed and transported to PGE's McLoughlin facility and/or PGE's PSC facility. In November 2010, PGE removed the remaining oil-filled electrical equipment (bushings, pole-mounted transformers, small capacitors, etc.) and transported it to PGE's McLoughlin facility and/or PGE's PSC facility. PGE no longer stores oil-filled electrical equipment at the Harborton storage yards.</p> <p>In addition, the water analytical data (Q15_1998-08-27 Water Data.pdf), attached in response to Question 15, may represent filtered vault water, prior to transport to and disposal at PSC.</p> <p><u>Former AST Area</u> Activities in the AST area include the historical fuel transfer to, storage, and transfer from the ASTs via pipeline, truck/trailer barge, and rail car from approximately 1973 to 1985. These tanks were emptied in 1985. Between October and December 2009, the ASTs and associated fuel pipelines, including the pump station, were removed from the site. Pipes passing under roads or through cement foundations were drained and capped on both ends, but were not removed.</p> <p><u>Former Rail Car Unloading Area</u> Between October and December 2009, the rail car fuel risers and associated fuel pipelines were removed. The utility box previously located at the end of the railroad spur was also removed in October/December 2009.</p> <p><u>West Equipment Storage Yard</u> From 1992 to 2002, new and non-leaking surplus (used) equipment (e.g., transformers,</p>	

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	<p>skid-mounted oil tank, and capacitors) with < 500 ppm PCBs were stored in this area. From 2002 to October/December 2009, non-leaking surplus (used) equipment with < 50 ppm PCBs was stored in this area. Between October and December 2009, the majority of the oil-filled electrical equipment with < 50 ppm PCBs (i.e., large transformers and capacitors) were removed and transported to PGE's McLoughlin facility and/or PGE's PSC facility. In November 2010, PGE removed the remaining oil-filled electrical equipment (bushings, pole-mounted transformers, small capacitors, skid-mounted oil tank, etc) and transported it to PGE's McLoughlin facility and/or PGE's PSC facility. PGE no longer stores oil-filled electrical equipment at the Harborton storage yards. Electrical equipment that does not contain oil (e.g., battery houses) is also stored in this area.</p> <p><u>Parcels B through G Activities</u></p> <p>Parcel C is relatively undeveloped and is currently used for PGE's electrical transmission lines. Prior to 1997, a submerged electrical cable terminus was historically located on the eastern side of Parcel C. PGE activities were limited to the initial construction, maintenance (as needed), and removal of an associated above ground oil tank after it was vandalized in 1997. In November 2009 and June 2010, URS Corporation, on behalf of PGE, collected soil samples within the vicinity of the cable terminus area. For more information, see the response and document (Q15_2009-2010 Activity Summary Report.pdf) to Question 15 and the separate 104(e) response for Miscellaneous Spills, Distribution Network, and Submerged Cables. Additionally, in addition, the historical 14-inch fuel pipeline that connected the ASTs at Parcel A to the GP dock passed through the parcel.</p>	
6. Identify any persons who concurrently with you exercises or exercised actual control or who held significant authority to control activities at each Property, including:		
b. any contractor, subcontractor, or licensor that exercised control over any materials handling, storage, or disposal activity on the Property; (service contractors, remediation contractors, management and operator contractors, licensor providing technical support to licensed activities);	<p>Additional fill material (from offsite roadway construction projects) was placed at Harborton Substation (Parcel A) in 1986 by the Oregon Department of Transportation (ODOT); see the document (Q13k_1986-03-14 ODOT Fill Offer & Fence Move.pdf) attached in response to Question 13k and the documents (Q52_1986 COP Greenway Permitfill.pdf and Q52_1986 OSHD Fill Permit.pdf) attached in response to Question 52.</p> <p>Since 1970, environmental consultants and contractors have conducted a series of environmental investigations, construction activities, or demolition/scrapping activities at Harborton Substation (Parcel A). The attachment (Q06b_1970-2011 PGE Contractors-Suppliers.pdf) provides a list of consultants, contractors, and materials suppliers that PGE utilized for Harborton Substation (Parcel A) activities between 1970 and 2011. These consultants/contractors include, but are not limited to:</p>	<p>Question 6 Attachment Q06b_1971-2011 PGE Contractors-Suppliers.pdf</p> <p>See Question 13 Attachments Q13k_1986-03-14 ODOT Fill Offer & Fence Move.pdf</p>

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EPA Question	Response	Records/Information Available
	<ul style="list-style-type: none"> • Port of Portland – Placed 672,500 cubic yards of dredge material within diked portion of Parcel A. • Willamette Western Corp – Placed 113,790 cubic yards of dredge material within the diked portion of Parcel A. • Whitecross Excavating Inc. – Placed 3,000 cubic yards of overburden fill material from the GP property within the southwestern area of the diked portion of Parcel A. • Ebasco – Engineering services & construction management • Turbo Power & Marine Services – Turbine plant construction • Dames & Moore – River sediment investigation & site environmental investigations • Fed H Slate – Site grading, roadway, and drainage construction • Copenhagen – Fuel Pump Facility construction • Reliable Paint – Sandblast and prime ASTs • EMCON – Environmental investigation for Metro (potential buyer in 1998) • HAZCON – Asbestos survey • Baseline Construction, Inc. – AST deconstruction activities • URS Corporation – Environmental investigations 	
c. any person subleasing land, equipment or space on the Property;	<p>To the best of PGE's knowledge, after reasonable inquiry, the following leases and subleases of land, equipment or space occurred on Parcels A through H during PGE's ownership:</p> <p><u>Leases (Parcel A)</u> PGE leased the ASTs and associated pipelines/facilities (Parcel A) to several companies.</p> <ul style="list-style-type: none"> • On 10 December 1991, PGE granted a 5-year lease to Columbia Petroleum Company (CP) for a portion of Harborton Substation (the former distillate fuel tank area, the fuel transfer station, and the majority of the west equipment storage area) and use of the associated piping within Parcel A and within the OFTG. The lease was terminated on 30 March 1992. PGE requested that CP vacate the Harborton Substation and return the ASTs and piping back to operable condition by 31 December 1992, and on 13 April 1993, PGE sent CP a letter insisting that they vacate the property within 30 days because they had failed to do so as of that date; see the documents (Q07_1992-10-27 PGE Request to CP to vacate.pdf and Q07_1993-04-13 PGE to CP re vacating) attached in response to Question 7. 	<p><u>Leases</u> Q07_1993-04-13 PGE to CP re vacating.pdf</p>
d. utilities, pipelines, railroads and any other person with activities and/or easements regarding the Property;	<p>There was an unauthorized use of the Harborton Substation railroad spur in 1974. Burlington Northern Inc. (BNI) was storing rail cars on PGE's railroad spur without authorization. PGE notified BNI of this unauthorized use and BNI ceased using the railroad spur. See the attached document (Q06d_1974-03-29 BNI Use of Spur Track.pdf).</p>	<p>Question 6 Attachment Q06d_1974-03-29 BNI Use of Spur Track.pdf</p>
Section 2.0 - Owner/Operator Information (continued)		
7. Identify and describe any legal or equitable interest that you now have, or	<p><u>Deeds (Parcels A through G)</u></p> <ul style="list-style-type: none"> • Parcel E was purchased by PGE from (b) (6) on 4 April 1975; see the attached deed (Q07_Deed (b) (6) to PGE 1975.pdf). This parcel was used as a 	<p><u>Leases</u> Q07_1992-01-29_COP Permit to CP.pdf Q07_1992-02-19_COP permit to CP.pdf</p>

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<p>previously had in each Property. Include information regarding the nature of such interest: when, how, and from whom such interest was obtained; and when, how, and to whom such interest was conveyed, if applicable. In addition, submit copies of all instruments evidencing the acquisition or conveyance of such interest (e.g., deeds, leases, purchase and sale agreements, partnership agreements, etc.). Also provide all information and documentation regarding, but not limited to the following:</p>	<p>residential property prior to purchase by PGE.</p> <p><u>Leases (Parcel A)</u></p> <ul style="list-style-type: none"> On 10 December 1991, PGE granted a 5-year lease to CP for a portion of Harborton Substation (the former distillate fuel tank area, the fuel transfer station, and the majority of the west equipment storage area) and use of the associated piping within Parcel A and within the OFTG. See Q07_1992-01-29_COP Permit to CP.pdf and Q07_1992-02-19_COP permit to CP.pdf. On 13 April 1993, PGE sent CP a letter insisting that they vacate the property within 30 days because they had failed to do so, stating that if they failed to vacate within the 30 days that PGE would assume that the remaining equipment was abandoned and would be removed by PGE at CP's expense; see the attached document (Q07_1993-04-13 PGE to CP re vacating). <p><u>Easements (Parcels A and B)</u></p> <ul style="list-style-type: none"> When PGE purchased the Harborton Substation (Parcel A) and Parcel B in 1968, PGE assumed the existing easement to the Olympic Pipe Line Company for the 14-inch diameter pipeline for transportation of oil, gas, water, or other fluid, which was originally granted by the previous property owner, Peninsula Agencies Inc on 22 July 1964. <p><u>Agreements/Permits (Parcels A and H)</u></p> <ul style="list-style-type: none"> In October and November 1971, PGE had the Port of Portland place 672,500 cubic yards of dredge material within the diked portion of Parcel A for site development. The fill material was dredged from 40 feet of river channel along the Harborton Property shoreline. See the attached document (Q07_1971-12-22 POP Dredge Material Invoice.pdf), as well as the documents (Q13k_1971-01-06 dredging fill placement memo.pdf, Q13k_Fall 1971_ 1st Diking and Fill Documents.pdf, Q13k_1973-06-15 Site Prep Chronology.pdf, and Q13k_1977-05 Harborton Chronology.pdf) attached in response to Question 13k. In 1972, PGE entered into an agreement with Northwest Natural for the installation of gas pipelines and supply of natural gas for the Harborton Turbines; see the attached communications document (Q07_1972-1973 NWNatural Communications.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate the actual agreement. In January and February 1972, PGE had Willamette Western Corp (also historically known as Western Pacific Dredging Co and Willamette Tug & Barge Co, and currently known as Riedel International Inc.) place 113,790 cubic yards of dredge material within the diked portion of Parcel A. The fill material was dredged from the portion of the river at the southeastern corner of Parcel A. See the attached document (Q07_1972 WWC Dredging & Fill Documents.pdf), as well as the documents (Q04g_1972-01-06 GP-COE Dredge Permit Mod.pdf, Q04g_1972-01-13 dredging authorization.pdf, Q13k_1972-12-18 Harborton Site Fill Authorization.pdf, 	<p>Q07_1993-04-13 PGE to CP re vacating.pdf</p> <p><u>Agreements/Permits</u></p> <p>Q07_1971-12-22 POP Dredge Material Invoice.pdf Q07_1972 WWC Dredging & Fill Documents.pdf Q07_1972-01-12_Crosswhite Additional Fill.pdf Q07_1972-09-21 PGE-BNI Railroad Spur Agrmnt-missing.pdf Q07_1973-02-16 BNI-PGE RR Spur ReLoc.pdf Q07_1972-11-15 SPPL Pipeline Service.pdf Q07_1973-03-30 SPPL Oil Quality Restrict.pdf Q07_1973-09-10 SPPL-PGE Schedule Policy.pdf Q07_1972-1973 NWNatural Communications.pdf</p> <p><u>Other Arrangements</u></p> <p>Q07_1977-05-31 ACF Indust Use of RR Spur.pdf</p> <p>Also see Question 4 Attachments Q04g_1972-01-06 GP-COE Dredge Permit Mod.pdf Q04g_1972-01-13 dredging authorization.pdf</p> <p>Also see Question 13 Attachments Q13k_1971-01-06 dredging fill placement memo.pdf Q13k_Fall 1971_ 1st Diking and Fill Documents.pdf Q13k_1973-06-15 Site Prep Chronology.pdf Q13k_1977-05 Harborton Chronology.pdf Q13k_1972-12-18 Harborton Site Fill Authorization.pdf Q13k_1971-01-07 Sediment movement memo.pdf Q13k_1986-03-14 ODOT Fill Offer & Fence Move.pdf</p> <p>Also see Question 52 Attachments Q52_1986 COP Greenway Permitfill.pdf Q52_1986 OSHD Fill Permit.pdf</p>

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	<p>Q13k_1973-06-15 Site Prep Chronology.pdf, and Q13k_1977-05 Harborton Chronology.pdf) attached in response to Questions 4g and 13k.</p> <ul style="list-style-type: none"> In January 1972, PGE also had Crosswhite Excavating Inc. place 3,000 cubic yards of overburden fill from the GP property within the southwestern area of the diked portion of Parcel A; see the attached document (Q07_1972-01-12_Crosswhite Additional Fill.pdf) and the document (Q13k_1971-01-07 Sediment movement memo.pdf) attached in response to Question 13k. On 21 September 1972, PGE and Burlington Northern Inc. (BNI) entered into an agreement for BNI to construct a spur off their railroad, which continued onto Parcel A where it terminated; see the attached documents (Q07_1972-09-21 PGE-BNI Railroad Spur Agrmnt-missing.pdf). Please note that, to the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate the actual agreement (the cover letter for the agreement is attached). In February 1973, PGE and BNI entered into a second agreement to slightly modify the location of the spur; see the attached document (Q07_1973-02-16 BNI-PGE RR Spur ReLoc.pdf). On 10 September 1973, PGE and SSPL signed an agreement regarding the construction, operations, and maintenance of fuel delivery facilities for product delivery to the ASTs; see Q07_1972-11-15 SPPL Pipeline Service.pdf, Q07_1973-03-30 SPPL Oil Quality Restrict.pdf, and Q07_1973-09-10 SPPL-PGE Schedule Policy.pdf. In 1986, PGE allowed the Oregon Department of Transportation (ODOT) to place additional fill material (from offsite roadway construction projects) within Parcel A; see the documents (Q13k_1986-03-14 ODOT Fill Offer & Fence Move.pdf, Q52_1986 COP Greenway Permitfill.pdf, and Q52_1986 OSHD Fill Permit.pdf) attached in response to Questions 13k and 52. <p><u>Other Arrangements (Parcel A)</u></p> <ul style="list-style-type: none"> In 1977, ACF Industries Inc. inquired about the possibility of using PGE's railroad spur track to store rail cars; see the attached document (Q07_1977-05-31 ACF Indust Use of RR Spur.pdf). To the best of PGE's knowledge, after reasonable inquiry, the request was not granted. 	
Section 3.0 - Description of Each Property		
13. Provide the following information about each Property identified in response to Question 4:		
b. location of underground utilities (telephone, electrical, sewer, water main,	To the best of PGE's knowledge, after reasonable inquiry, the following underground utilities were Parcel A and Parcel B:	Question 13 Attachments Q13b_1972-1973 COP Water Main for Fire Prot.pdf

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etc.);	<ul style="list-style-type: none"> To the best of PGE’s knowledge, after reasonable inquiry, telephone lines were installed in 1973 within the underground conduits discussed above to provide telephone services at five locations at the Harborton facility; see the attached document (Q13b_1973-03-30 Telephone Circuits.pdf). There are natural gas pipelines in Parcel A associated with the former Gas Turbine Plant, which are connected to a Northwest Natural gas main; see the attached documents (Q13b_Gas Turbine Piping Layout 1973.pdf and Q13b_Yard Piping 1973.pdf), as well as the document (Q07_1972-1973 NWNatural Communications.pdf) attached in response to Question 7. These gas pipelines were purged and made inoperable in 1981; see the document (Q13k_1981-04-24 Plant Decom-Status.pdf) attached in response to Question 13k. Fuel pipelines, with a cathodic protection system, in Parcel A included the following: <ul style="list-style-type: none"> Pipelines connected the ASTs to the former Gas Turbine Plant, running east along the access road on the north side of the AST farm and then jogging north into the generating plant; and Pipelines connected the ASTs to the SPPL fuel pipeline and the fuel pumping facility at the GP dock south of Parcel A (running from the dock, through the OFTG, through Parcel C, and terminating at the ASTs in Parcel A). <p>These fuel pipelines were made inoperable in 1981; see the document (Q13k_1981-04-24 Plant Decom-Status.pdf) attached in response to Question 13k. The fuel pipelines were removed from the site between October and December 2009, except those passing under roads or through cement foundations, which were drained and capped on both ends. See the attached documents (Q13b_1973-05-01 SPPL Pipeline Diagram.pdf, Q13b_1973-01-30 Cath Prot System C-2973-1D.pdf, Q13b_1973-02-02 Cath Prot System C-2973-2D.pdf, Q13b_Pipe Connection on GP Prop Dwg.pdf, Q13b_Pipeline Plat 2000-10-19.pdf, and Q13b_Yard Piping 1973.pdf), as well as the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.</p> There are water pipelines in Parcel A, which connect to the water main along NW Marina Way. These water pipelines service the fire hydrants on the north and east sides of the former AST area and a general purpose water spigot near the west equipment storage yard. The water pipelines and fire protection system was installed in 1973 after the extension of the 8” COP water main to the facility; see the attached document (Q13b_1972-1973 COP Water Main for Fire Prot.pdf). <p>To the best of PGE’s knowledge after reasonable inquiry, the only underground utilities on Parcel C were PGE’s historical 14-inch fuel pipeline that passed through the parcel and the</p>	<p>Q13b_1973-05-01 SPPL Pipeline Diagram.pdf Q13b_1973-01-30 Cath Prot System C-2973-1D.pdf Q13b_1973-02-02 Cath Prot System C-2973-2D.pdf Q13b_1973-03-30 Telephone Circuits.pdf Q13k_1981-04-24 Plant Decom-Status.pdf</p> <p>Also see Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf</p>

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	submerged cable terminus.	
c. location of all underground pipelines whether or not owned, controlled or operated by you;	<p>To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the underground pipelines on Parcels A, B, and C:</p> <ul style="list-style-type: none"> The former fuel pipelines in Parcel A connected the rail car unloading pump to the former ASTs. These ran parallel to the rail road spur; connected the former ASTs to the former Gas Turbine Plant, ran east along the access road on the north side of the former AST farm and then jogged north into the gas plant; and connected the former ASTs to the former fuel pumping facility at the GP dock south of Parcel A, running from the dock, through the OFTG, through Parcel C, and terminating at the ASTs in Parcel A. These fuel pipelines were removed from the site between October and December 2009, except those passing under roads or through cement foundations, which were drained and capped on both ends; see the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15. Stormwater outlets drain the former AST areas, the former Fuel Pump Station, and a portion of the switchyard; see response to Question 13i for more information. 	Also see Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf
d. surface structures (e.g., buildings, tanks, pipelines, etc.);	<p>In addition to containment dikes, power poles, telephone poles (outside of the facility and connected to the underground telephone lines within the facility), facility fencing, and streetlights, the following text describes the other surface structures located at the Harborton Substation (Parcel A). Historical structures that are no longer present are marked "historical."</p> <p><u>Former Generating Plant ("Gas Turbine Generating Plant")</u></p> <p>Equipment:</p> <ul style="list-style-type: none"> Temporary storage of assorted oil-filled electrical equipment (e.g., transformers and capacitors) (historical) Temporary storage of assorted non-oil filled electrical equipment Two 85 MVA step-up transformers (Nos. 10537 and 10538) <p><u>AST Area</u></p> <p>Equipment</p> <ul style="list-style-type: none"> Three sump pumps at catch basins with release valves and outlet pipes Oil/water separator (historical) <p><u>Rail Car Unloading Area</u></p> <p>Equipment</p> <ul style="list-style-type: none"> 26 fuel unloading connections/risers (historical) <p><u>West Equipment Storage Yard</u></p> <p>Equipment:</p> <ul style="list-style-type: none"> Skid-mounted oil tanks (historical) 	<p>Question 13 Attachments</p> <p>Q13d_1970-02-12 Specs for Fence & Diagram.pdf</p> <p>Q13d_1973- 04-26 Maint Bldg Door.pdf</p> <p>Q13d_Fuel Pumping Station Pics.pdf</p> <p>Also see Question 21 Attachments</p> <p>Q21a_1973-04-18 Wagner-PGE SU Xformer Ship.pdf</p> <p>Q21a_1973 Wagner Step-up Xformer Updates.pdf</p> <p>Q21a_1986-1987 Wagner Step-up Xformers Sale.pdf</p>

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	<ul style="list-style-type: none"> • Temporary storage of assorted oil-filled electrical equipment (e.g., transformers and capacitors) (historical) • Temporary storage of assorted non-oil filled electrical equipment <p>During PGE's historical generating plant operations (1973-1980), there were two 85 MVA Wagner Electric Corporation step-up transformers (Nos. 10537 and 10538) associated with the operations. In 1987, these step-up transformers were drained of oil and sold to the Montana Power Company. For further details on the historical step-up transformers, see the response and documents (Q21a_1973-04-18 Wagner-PGE SU Xformer Ship.pdf, Q21a_1973 Wagner Step-up Xformer Updates.pdf, and Q21a_1986-1987 Wagner Step-up Xformers Sale.pdf) to Question 21a.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, the only surface structures currently on Parcel C are the transmission line networks (e.g., transmission lines, cable terminals, and switching anchors). Prior to approximately 1997, a historical above ground oil tank was located on Parcel C, which was associated with a historical submerged cable terminus. The above ground oil tank was removed in 1997/1998 after the tank was vandalized.</p>	
<p>i. stormwater drainage system, and sanitary sewer system, past and present, including septic tank(s) and where, when and how such systems are emptied and maintained;</p>	<p>In May 2010, URS assessed the site stormwater and the potential for soil erosion from the developed portion of Harborton Substation (Parcel A) to be transported to the adjacent undeveloped land (Parcel A) and/or waterways. Figure A-1 of Appendix E in the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15 shows the direction of stormwater flow within and from the Harborton Substation. In general, the relatively flat topography and predominately gravelly surface soils of the site inhibit significant stormwater flows that would otherwise cause significant soil erosion. The majority of precipitation falling on the Harborton Substation infiltrates into the ground. Specific areas where evidence of stormwater flow and/or soil erosion were observed included:</p> <ul style="list-style-type: none"> • Stormwater from the northeast and northwest margins of the east equipment storage yard flows across sandy soil to the Parcel A boundary where it is entrapped by vegetation and infiltrates the surface. • Stormwater from the northwest margin of the switchyard flows across sandy soil to the Parcel A boundary where it is entrapped by vegetation and infiltrates the surface. • Stormwater from portions of the switchyard, west equipment storage yard, and pole yard drains to a ditch within Parcel A and infiltrates the surface. • Stormwater from portions of the pole yard drains to a depression at the entrance to the pole yard within Parcel A and infiltrates the surface. Some of the stormwater from the switchyard flows into the pole storage yard via conduits, and subsequently into the depression at the entrance to the pole yard or the ditch and infiltrates the surface. 	<p>Also see Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf</p> <p>Also see Question 19 Attachment Q19_2003-02-14 SPCC.pdf Q19_2010_Harborton SPCC.pdf</p>

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	<ul style="list-style-type: none"> Stormwater from the railroad spur area drains to a low area at the northwestern area of Parcel A and stormwater infiltrates the surface. Prior to the late 2009 site deconstruction activities, stormwater within the secondary containment structure associated with the rail car unloading pump station flowed into an oil-water separator (labeled "oil separator #2" on the attached design drawing (Q13i_Grading & Drainage Plan 1972.pdf). To the best of PGE's knowledge, after reasonable inquiry, from approximately 1980/1985 (when the rail pump station was no longer used) to late 2009 the outflow from the oil water separator (now removed) was left in the on position and the stormwater was discharged to the adjacent low-lying area. From within the stormwater control and secondary containment system of the former AST area, stormwater that does not infiltrate the surface flows via two catch basins/culverts into a swale/stream south of the Substation, which then discharges to the Willamette River. To the best of PGE's knowledge, after reasonable inquiry, since 1985 (when the ASTs were emptied) the catch basin valves have been left in the open position for continual discharge into the wetland area south of the Harborton Substation. Prior to 1985, these catch basin valves were only opened under close surveillance to permit surface water to drain from the formerly impermeably bermed AST area. Stormwater from the former pump station area that does not infiltrate the surface flows into a catch basin/culvert, which discharges into a swale/stream south of the Substation and subsequently to the Willamette River. Prior to the late 2009 site deconstruction activities, stormwater flowed into an oil-water separator (now removed) prior to flowing into the catch basin. To the best of PGE's knowledge, after reasonable inquiry, since approximately 1981/1985 (when the fuel system was made inoperable and the ASTs were emptied) the catch basin valves been left in the open position for continual discharge into the wetland area south of the Harborton Substation. Prior to 1981/1985, these catch basin valves were only opened under close surveillance to permit surface water to drain from the area. Stormwater within the distribution substation secondary containment system (liner) flows into an oil-water separator and then into piping that discharges to the swale to the south of Harborton Substation, which subsequently discharges to the Willamette River; see the document (Q19_2010_Harborton SPCC.pdf) attached in response to Question 19. Stormwater flow from outside of the lined area was not observed, instead, this stormwater infiltrates the surface. <p>Evidence of significant sediment transport from the former AST area and former pump area to the swale/stream, and subsequently the river, was not observed. The stormwater and soil erosion analysis concluded that soil erosion appears to be an ongoing but very minor process within the Harborton Substation and that the transport of soils via stormwater from the developed portions of Harborton Substation are unlikely to reach either the adjacent wetland areas or the Willamette River. For further details, see Appendix E of the document (Q15_2009-</p>	

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	<p>2010 Activity Summary Report.pdf) attached in response to Question 15.</p> <p>See the attached design drawings (Q13i_Grading & Drainage Plan 1972.pdf and Q13i_West Area Grading Plan 1976.pdf), and the Facility Diagram figures included in the 2003 SPCC plans for Harborton (Q19_2003-02-14 SPCC.pdf and Q19_2003-12-15 SPCC.pdf) attached in response to Question 19. For current conditions (i.e., post deconstruction of the oil storage yard), see the 2010 SPCC Facility Diagram for Harborton (Q19_2010_Harborton SPCC.pdf) attached in response to Question 19.</p>	
<p>k. any and all major additions, demolitions or changes on, under or about the Property, its physical structures or to the Property itself (e.g., stormwater drainage, excavation work); and any planned additions, demolitions or other changes to the Property;</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the following presents a timeline of significant activities and changes at the Harborton Substation (Parcel A) during PGE's ownership:</p> <ul style="list-style-type: none"> • 1970-1971 – Site clearing and dike construction. • 1971 – Port of Portland places 672,500 cu yards of fill/dredge material within the diked portion of the Parcel A. • 1972 – Willamette Western Corporation (also historically known as Willamette Tug & Barge and Western Pacific Dredging and currently as Riedel International) places 113,790 cu yards of dredge fill within the diked portion of the Parcel A. • 1972 – Crosswhite Excavating Inc. places 3,000 cubic yards of overburden fill from the GP property within the diked portion of Parcel A. • 1972 – Site grading, fencing, and preparation for the facility. • 1972-1973 – Installation of four dual gas turbine electrical generators (8 turbines total), construction of two 100,000 barrels (4.2 million gallon) ASTs (with 94,000 barrels storage capacity due to floating roofs) to store diesel fuels, installation of fuel piping, construction of a railroad spur, and completion of the substation. The turbines operate on both natural gas and/or fuel. • 1973 – Extension of the 8" COP water main to the facility and installation of the facility's fire protection system. • 1973-1975 – Smoke abatement system installed; however, there were operational difficulties with firing the turbines with the use of smoke abatement system and fuel additive. To the best of PGE's knowledge, after reasonable inquiry, PGE did not continue to use this system. • 1974 – AST paint repair • 1975/1976 – The fuel outlet flexible hose on AST #2 is replaced by an expansion joint. • 1976 – PGE completes west area grading and additional fencing. Installation of a remote terminal unit (RTU). • 1978 – Three of four turbine engine units are made inoperable. • 1981 – PGE makes the gas and fuel pipelines to the turbines inoperable. • 1983 – PGE performs test runs of their turbines to demonstrate the serviceability and condition for their sale. • 1986 – The gas turbines are sold and removed from the property. • 1986 – PGE permitted ODOT to place fill on the Harborton Substation. PGE modifies 	<p>Question 13 Attachments</p> <p>Q13b_1972-1973 COP Water Main for Fire Prot.pdf Q13k_1981-04-24 Plant Decom-Status.pdf Q13k_1973-05-09 Turbine Equip Delivery List.pdf Q13k_1973-06-15 Site Prep Chronology.pdf Q13k_1975-1976 Ebasco-PGE Flex Hose Failure.pdf Q13k_1977-05 Harborton Chronology.pdf Q13k_1978-07-31 Condition of 3 Turbine Units.pdf Q13k_1986-03-14 ODOT Fill Offer & Fence Move.pdf Q13k_Grading and Dredging Plan C-11019.pdf Q13k_1971-12-21 TPM-PGE Turb Twin Pack Order.pdf Q13k_1972-01-05 TPM-PGE Turb Maint Equip & Storage.pdf Q13k_1982-01-18 Plant Decom-Charact & Perform Turb.pdf Q13k_1982-05-07 Plant Decom-Noise Supress Survey.pdf Q13k_1983-04-01 Plant Decom-Field Service Rprt.pdf Q13k_1973-11-29 Apollo DGT-2 System.pdf Q13k_1973-12-13 Smoke Abate System.pdf All Question 13m Attachments</p> <p>Also see Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf</p> <p>Also see Question 21 Attachments Q21a_1973-06-25 Apollo Smoke Suppressant.pdf Q21a_1974-01-22 Smoke Abate Add Impact.pdf Q21a_1974-08-22 Smoke Abate Source Test.pdf Q21a_1975-01-20 Smoke Abate Turbs Not Fired.pdf</p>

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	<p>facility fencing.</p> <ul style="list-style-type: none"> • 2003-2009 – The East and West Storage Yards were used for the storage of surplus (used) electrical equipment, including oil-filled electrical equipment (e.g., capacitors and transformers) with < 50 ppm PCBs. • 2009 – Removal of the ASTs, fuel pump station, and associated fuel pipelines (except those that are located under roadways or concrete, which were drained and capped at both ends). • 2009 – Removal of the concrete oil water separator located in the south unused area and which drained stormwater from the former fuel pump station. • 2009 – Grading of the developed portion of the site to remove the berm between the former AST area and former pump station, and to reduce the berm between the main road and the former AST area. • 2009 – Installation of bollards around five hydrants along the main road. • 2009 – Removal of the old parade float from the east equipment storage yard. • 2009/2010 – Removal of the surplus oil-filled electrical equipment from the East and west equipment storage yards. • 2003-present – The Harborton Substation is used for substation and switchyard operations, the storage of surplus (used) non-oil-filled electrical equipment (except bushings), the storage of new and used pre-treated wood utility poles, temporary storage of obsolete (used) utility poles prior to disposal, and storage of other miscellaneous PGE operations supplies (e.g., Bobcat, concrete forms, and fencing). <p>See the attached documents, as well as the document (Q13b_1972-1973 COP Water Main for Fire Prot.pdf) attached in response to Question 13b, the documents attached in response to Question 13m, the documents (Q15_Bridgewater-HAI 2002 Pre-RI Report.pdf and Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15, the documents (Q21a_1973-06-25 Apollo Smoke Suppressant.pdf, Q21a_1974-01-22 Smoke Abate Add Impact.pdf, Q21a_1974-08-22 Smoke Abate Source Test.pdf, Q21a_1975-01-20 Smoke Abate Turbs Not Fired.pdf) attached in response to Question 21a.</p>	
I. all maps and drawings of the Property in your possession; and	<p>Please see the attached drawings and figures</p> <p>Also see the figures attached in response to other questions herein.</p>	<p>Question 13 Attachments Q13I_1951-06-18 Pipelines in Harb Vicinity.pdf Q13I_1972-01-31 Fig 88152.pdf</p>
15. For each Property, provide all reports, information or data you have related to soil, water (ground and surface), or air quality and geology/hydrogeology at and about each Property. Provide copies of all documents containing such data and information, including both past and current aerial	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE has the following reports, information, or data related to soil, water (ground and surface), or air quality and geology/hydrogeology at the Harborton Substation (Parcel A) and Parcel B:</p> <ul style="list-style-type: none"> • In July 1971, Dames & Moore completed a soil characterization/classification investigation for River dredging, evaluating the suitability of the river dredge material for use as site fill; see the attached documents (Q15_1971-07-01 D&M Dredge Soils Report.pdf and Q15_1971-12-03 D&M River Dredge Borings.pdf). To the best of PGE's knowledge, after reasonable inquiry, the dredge material was not analyzed for contamination prior to placement at the site. 	<p>Question 15 Attachments <u>Reports</u> Q15_1971-07-01 D&M Dredge Soils Report.pdf Q15_1971-10-06 PGE Env Statement.pdf Q15_1971-12-03 D&M River Dredge Borings.pdf Q15_1972-03-01 D&M Foundation Report.pdf Q15_1972-07-27 TPM Modeled Exhaust Study.pdf Q15_1972-07 PGE Theoretical Plume Rise.pdf Q15_1972-09-01 D&M Found Lab Test Report.pdf Q15_1972-10-27 D&M Piling Inspec Report.pdf</p>

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<p>photographs as well as documents containing analysis or interpretation of such data.</p>	<ul style="list-style-type: none"> In October 1971, PGE completed an environmental statement report on the Harborton and Bethel Generating Facilities; see the attached document (Q15_1971-10-06 PGE Env Statement.pdf). The report assessed the potential environmental impact of the then proposed generating plants. Between 1972 and 1976, Dames & Moore completed several soil investigations to determine the appropriate locations for structural foundations (e.g. ASTs, turbines, switchyard, etc.) in conjunction with the initial development/construction of the Harborton Substation; see the attached documents (Q15_1972-03-01 D&M Foundation Report.pdf, Q15_1972-09-01 D&M Found Lab Test Report.pdf, Q15_1972-10-27 D&M Piling Inspec Report.pdf, Q15_D&M 1972 Boring Report.pdf, Q15_D&M 1972 Preliminary Foundation Rec.pdf, Q15_1973-08-03 D&M AST Soil Test Report.pdf, Q15_D&M 1973 Soil Investigation.pdf, and Q15_D&M 1976 Foundation Investigation.pdf). In 1972, Turbo Power & Marine Systems (TPM) completed a study of diffusion of exhaust emissions (modeled) for the Harborton Generating Plant; see the attached document (Q15_1972-07-27 TPM Modeled Exhaust Study.pdf). In 1972, PGE completed a theoretical (modeled) plume rise and diffusion study for the Harborton Generating Plant; see the attached document (Q15_1972-07 PGE Theoretical Plume Rise.pdf). In 1974, TPM conducted installation testing for performance and exhaust smoke on the two dual ("Twin Pacs") turbines, each of which utilized two Pratt & Whitney Aircraft gas turbine engines (units 1 through 4); see the attached documents (Q15_1974-07-01 TPM Install Test Unit 1.pdf, Q15_1974-07-01 TPM Install Test Unit 2.pdf, Q15_1974-07-01 TPM Install Test Unit 3.pdf, and Q15_1974-07-01 TPM Install Test Unit 4.pdf). Between 1974 and 1976, Glen Odell (on behalf of PGE) completed exhaust testing and air quality impact investigations; see the attached document (Q15_1974-03-05 Odell Exhaust Test Report.pdf, Q15_1974-03-04 Odell bill of materials.pdf, Q15_1974-11-11 Odell Emissions Test Error.pdf, Q15_1974-12-03 Odell Air Quality Impact Rprt.pdf, and Q15_Odell 1976 Air Quality Report.pdf). In 1975, Ebasco Services Inc. completed a soil settlement report for the ASTs; see the attached document (Q15_1975-02-19 Ebasco Tank Settlement.pdf). In 1975, Science Applications completed an air quality tracer study for the Harborton Generating Facility; see the attached document (Q15_1975 Mar-Jul 1976 SA Air Quality Tracer.pdf). 	<p>Q15_1973-08-03 D&M AST Soil Test Report.pdf Q15_1974-03-05 Odell Exhaust Test Report.pdf Q15_1974-11-11 Odell Emissions Test Error.pdf Q15_1974-12-03 Odell Air Quality Impact Rprt.pdf Q15_1974-03-04 Odell bill of materials.pdf Q15_1974-07-01 TPM Install Test Unit 1.pdf Q15_1974-07-01 TPM Install Test Unit 2.pdf Q15_1974-07-01 TPM Install Test Unit 3.pdf Q15_1974-07-01 TPM Install Test Unit 4.pdf Q15_1975-02-19 Ebasco Tank Settlement.pdf Q15_1975 Mar-Jul 1976 SA Air Quality Tracer.pdf Q15_2009-2010 Activity Summary Report.pdf Q15_2006-09-12 Soil Sampling Summary.pdf Q15_2007-08-24 Soil Sampling Summary.pdf Q15_2007-10-07 Soil Samp at Pole Strg Yard.pdf</p> <p><u>Raw Data</u> Q15_1971-11-16 PGE Ambient Data.pdf Q15_1972-11-29 PGE Ambient Data - Interim.pdf Q15_1972-08-10 Soil Resistivity Test.pdf Q15_1972-11-10 TPM Sound Pressure Levels.pdf Q15_1974-01-08 PGE Prelm Sound Levels.pdf Q15_1974-01-14 PGE Add Prelim Sound Levels.pdf Q15_1974-01-25 PGE Noise Levels at Sauvie.pdf Q15_1974-02-19 PGE Emission Status.pdf Q15_1974-04-15 PGE Sound Pressure Data.pdf Q15_1975_Dec PGE Turbine Emiss Units 1-4.pdf Q15_1975_Feb PGE Turbine Emiss Units 1-4.pdf Q15_1975_Nov PGE Turbine Emiss Units 1-4.pdf Q15_1975_Oct PGE Turbine Emiss Units 1-4.pdf Q15_1975_Sept PGE Turbine Emiss Units 1-4.pdf Q15_1976_April-Sept PGE Turb Emiss Units 1-4.pdf Q15_1976_Jan PGE Turbine Emissions Units 1-4.pdf Q15_1976_Sept-Dec PGE Turb Emiss Units 1-4.pdf Q15_1979_Dec PGE Turbine Emiss Units 1-4.pdf Q15_1983-03-01 Turbine Noise Emissions.pdf Q15_1994-03-23 Soil Data.pdf Q15_1995-10-06 Soil Data.pdf Q15_1995-12-05 Soil Data.pdf Q15_1996-01-23 Soil Data.pdf Q15_1997-02-27 Soil Data.pdf Q15_1997-03-24 Water Data.pdf Q15_1998-08-26 Water Data.pdf Q15_1998-08-27 Water Data.pdf</p>

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	<ul style="list-style-type: none"> In late 2009, surface soil samples were collected from the east and west equipment storage yards and analyzed for PCBs and petroleum hydrocarbons. In the east equipment storage yard, PCBs and petroleum hydrocarbons were detected at concentrations below applicable screening criteria; therefore, no further evaluation or remediation was performed. In the west equipment storage yard, PCBs were detected at concentrations below applicable screening criteria, while petroleum hydrocarbons were detected at concentrations exceeding 500 mg/kg and exceeding applicable screening criteria. Soils with concentrations of petroleum hydrocarbons exceeding 500 mg/kg were excavated and disposed of at the Hillsboro Landfill. For further details, see the attached document (Q15_2009-2010 Activity Summary Report.pdf). In late 2009 and early 2010, surface soil samples were collected from the perimeter of the developed portion of the Harborton Substation (Parcel A) and the cable terminus area (Parcel C). The perimeter samples were analyzed for PCBs, petroleum hydrocarbons, and PAHs. The cable terminus samples were analyzed for PCBs and petroleum hydrocarbons. In Parcel A perimeter soil and Parcel C soil, PCBs and petroleum hydrocarbons were detected at concentrations less than applicable screening criteria. The perimeter soil samples had a few locations exceeding screening criteria for PAHs. For further details, see Appendix E of the attached document (Q15_2009-2010 Activity Summary Report.pdf). In late 2009 and early 2010, sediment samples were collected from the mouth of the culverts draining the former AST area and pump station and from within the swale/stream adjacent to the southern boundary of the developed portion of Harborton Substation (Parcel A). Sediment samples did not exceed screening criteria for petroleum hydrocarbons. PCBs were only detected at two locations, at the mouth of the former pump station culvert and at the mouth of the swale/stream where it meets the Willamette River. Since none of the intervening samples within the swale/stream detected PCBs, it is highly unlikely that PCBs are being transported from the developed portion of the Harborton Substation to the Willamette River. Because PAHs were detected with no discernable pattern and detected upstream of the site's discharge points into the swale/stream, some, or all, PAHs within the swale/stream may be attributable to a source other than Harborton Substation. For further details, see Appendix E of the attached document (Q15_2009-2010 Activity Summary Report.pdf). In May 2010, a soil erosion assessment was conducted to evaluate the potential for soil to erode from the developed portion of Harborton Substation to the undeveloped portions, and subsequently to the Willamette River. The stormwater and soil erosion analysis concluded that soil erosion appears to be an ongoing but very minor process within the Harborton Substation and that the transport of soils via stormwater from 	<p>Q15_2000-10-11_DEQ Split Sample.pdf Q15_2002-03-01 Data.pdf Q15_2002-03-01 GW Data.pdf Q15_2002-04-11 Soil Data.pdf Q15_2006-09-12 Soil Data.pdf Q15_2007-08-24 Soil Data.pdf</p> <p><u>Other Document</u> Q15_1974-03-04 Smoke Spot Exceed Permit.pdf Q15_1975-11-12 Meredith-PGE Noise Letter.pdf Q15_Harborton Sediment Chemicals.pdf Q15_2010-08-06_Parcel F East Cable Terminus Photos.pdf Q15_2009_Deconstruction Photos.pdf Q15_2010-06-15_Sampling Photos.pdf Q15_2010-06-18_Sampling Photos.pdf Q15_2010-07-19_Sampling Photos.pdf Q15_2010-07-26 Sampling and Site Photos.pdf</p> <p>Also see Question 19 Attachments Q19_1985-10-09 SPCC.pdf Q19_1986-10-17 SPCC.pdf Q19_1996-03-05 SPCC.pdf Q19_2003-02-14 SPCC.pdf Q19_2003-12-15 SPCC.pdf Q19_1997-07-28 SPCC.pdf Q19_1999-02-23 SPCC.pdf Q19_2010_Harborton SPCC.pdf Q19_2000-07-20 SPCC.pdf</p> <p>Also see Question 50 Attachments Q50_1972-1976 Emission Correspondences.pdf Q50_DEQ Staff Report for 1973 Public Hearing.pdf Q50_1974 DEQ Correspondences.pdf Q50_PUC Study 1977.pdf Q50_Special Report_The Harborton Issue 1977.pdf Q50_1979 DEQ on Harborton Turbines.pdf Q50_2005-12-06 DEQ to Norton.pdf Q50_2004-05-18 EPA Agrees to Upland Source Control.pdf</p> <p>Also see all Question 62 Attachments</p>

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	<p>the developed portions of Harborton Substation are unlikely to reach either the wetland areas adjacent to the Parcel A or the Willamette River. For further details, see Appendix E of the attached document (Q15_2009-2010 Activity Summary Report.pdf), as well as the response to Question 13i.</p> <ul style="list-style-type: none"> A site visit was conducted at the Harborton east submersible cable terminus (Parcel F) on August 6, 2010; the map and photographs from that site visit are shown in the attached document (Q15_2010-08-06_Parcel F East Cable Terminus Photos.pdf) <p>Photographs taken during the 2009/2010 Harborton Substation (Parcel A) deconstruction activities and site sampling activities (Parcels A and C) are attached (Q15_2009_Deconstruction Photos.pdf, Q15_2010-06-15_Sampling Photos.pdf, Q15_2010-06-18_Sampling Photos.pdf, Q15_2010-07-19_Sampling Photos.pdf, and Q15_2010-07-26 Sampling and Site Photos.pdf).</p> <p>Additional soil, water, and air quality (noise and emissions) data not already included in the reports are attached. Also attached are two documents (Q15_1974-03-04 Smoke Spot Exceed Permit.pdf and Q15_1975-11-12 Meredith-PGE Noise Letter.pdf) related to data, but that do not actually contain data. In addition, a document (Q15_Harborton Sediment Chemicals.pdf) with a table comparing the Portland Harbor sediment concentrations (unknown date) adjacent to Harborton Substation to a 1973 USGS study is attached. Some of the agency correspondences contain air quality data or refer to air quality data that are no longer attached with the correspondence; see the document (Q50_1974 DEQ Correspondences.pdf) attached in response to Question 50.</p> <p>The SPCC Plan Q19_2010_Harborton SPCC.pdf, attached in response to Question 19, briefly discuss/show topography and/or soil condition at the Harborton Substation (Parcel A).</p>	
<p>a. a map showing the unit/area's boundaries and the location of all known units/areas whether currently in operation or not. This map should be drawn to scale, if possible, and clearly indicate the location and size of all past and present units/areas;</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the current and historical material and waste storage/treatment areas at Parcel A were:</p> <p><u>ASTs</u></p> <ul style="list-style-type: none"> Late 2009 – The ASTs and associated fuel pipelines (except those that are located under roadways or concrete, which were drained and capped at both ends) were removed. <p><u>Storage Yards</u></p> <ul style="list-style-type: none"> 2010 (present) – The east and west equipment storage yards are used for the storage of a limited quantity of non-oil-filled surplus equipment (e.g., battery houses and water tank). PGE no longer stores oil-filled electrical equipment at the Harborton storage yards. <p><u>Rail Car Unloading Area</u></p> <ul style="list-style-type: none"> Approximately 1973 to 1980 - The rail car unloading area was used to unload diesel fuel from rail cars along the rail spur. 	<p>See Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf</p>

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	<ul style="list-style-type: none"> Late 2009 – The rail fuel risers and associated fuel pipelines (except those that are located under roadways or concrete, which were drained and capped at both ends) were removed. <p><u>Fuel Transfer Station</u></p> <ul style="list-style-type: none"> Approximately 1973 to 1985 - The fuel transfer station was used to pump fuel from the pipeline to the ASTs and from the ASTs to the turbines. Late 2009 – The fuel pump station and associated fuel pipelines (except those that are located under roadways or concrete, which were drained and capped at both ends) were removed. <p>See the document Q15_2009-2010 Activity Summary Report.pdf attached in response to Question 15.</p>	
b. dated aerial photograph of the site showing each unit/area;	See Figure 3 in the Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf attached in response to Question 15.	Also see Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf
g. the construction (materials, composition), volume, size, dates of cleaning, and condition of each unit/area.	<p>To the best of PGE's knowledge, the following summarizes the construction, volume, size, and dates of cleaning (if any), and condition of the storage unit/areas at Parcel A:</p> <ul style="list-style-type: none"> In late 2009, the ASTs were demolished and removed from the site. The rail car unloading area is gravel-covered with railroad tracks and had unloading connectors (fuel risers) until late 2009. The fuel transfer station was demolished and removed from site in late 2009. 	
17. If the unit/area described above is no longer in use, how was such unit/area closed and what actions were taken to prevent or address potential or actual releases of waste constituents from the unit/area.	<p>The storage units/areas have been used for various storage purposes over the years of operations; see the response to Question 16. The rail car unloading area former ASTs, and former fuel transfer station are no longer used. A cement barricade was placed across the access road to the rail car unloading area.</p> <p>In late 2009, PGE removed the rail fuel risers, ASTs, and fuel transfer station, as well as associated fuel pipelines (except those that are located under roadways or concrete, which were drained and capped at both ends). The 2009/2010 deconstruction activities and soil sampling in the east and west storage areas resulted in the disposal of several types of waste material including old fuel, scrap metal, concrete, and gravel/soil with petroleum hydrocarbons. For further details, see the response and document (Q15_2009-2010 Activity Summary Report.pdf) to Question 15, as well as the response to Question 21.</p>	See Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf

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<p>18. For each Property, provide the following information regarding any current or former sewer or storm sewer lines or combined sanitary/storm sewer lines, drains, ditches, or tributaries discharging into the Willamette River:</p> <p>a. the location and nature of each sewer line, drain, ditch, or tributary;</p>	<p>In May 2010, URS assessed the site stormwater and the potential for soil erosion from the developed portion of Harborton Substation (Parcel A) to be transported to the adjacent undeveloped land (Parcel A) and/or waterways. Figure A-1 of Appendix E in the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15 shows the direction of stormwater flow within and from the Harborton Substation. In general, the relatively flat topography and predominately gravelly surface soils of the site inhibit significant stormwater flows that would otherwise cause significant soil erosion. The majority of precipitation falling on the Harborton Substation infiltrates into the ground. Specific areas where evidence of stormwater flow and/or soil erosion were observed included:</p> <ul style="list-style-type: none"> • Stormwater from the northeast and northwest margins of the east equipment storage yard flows across sandy soil to the Parcel A boundary where it is entrapped by vegetation and infiltrates the surface. • Stormwater from the northwest margin of the switchyard flows across sandy soil to the Parcel A boundary where it is entrapped by vegetation and infiltrates the surface. • Stormwater from portions of the switchyard, west equipment storage yard, and pole yard discharge to a ditch within Parcel A and infiltrate the surface. • Stormwater from portions of the pole yard drains to a depression at the entrance to the pole yard within Parcel A and infiltrates the surface. Some of the stormwater from the switchyard flows into pole storage yard via conduits, and subsequently into the depression at the entrance to the pole yard or the ditch and infiltrates the surface. • Stormwater from the railroad spur area drains to a low area at the northwestern area of Parcel A and infiltrates the surface. Prior to the late 2009 site deconstruction activities, stormwater within the secondary containment structure associated with the rail car unloading pump station flowed into an oil-water separator (labeled "oil separator #2" on the design drawing [Q13i_Grading & Drainage Plan 1972.pdf] attached in response to Question 13i). To the best of PGE's knowledge, after reasonable inquiry, from approximately 1980/1985 (when the rail pump station was no longer used) to late 2009 the outflow from the oil water separator (now removed) was left in the on position and the stormwater is discharged to the adjacent low-lying area. • From within the stormwater control and secondary containment system of the former AST area, stormwater that does not infiltrate the surface flows via two catch basins/culverts 	<p>Also see Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf</p> <p>Also see Question 19 Attachment Q19_2003-02-14 SPCC.pdf Q19_2003-12-15 SPCC.pdf Q19_2010_Harborton SPCC.pdf</p>

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	<p>into a swale/stream south of the Substation, which then discharges to the Willamette River. To the best of PGE's knowledge, after reasonable inquiry, since 1985 (when the ASTs were emptied) the catch basin valves have been left in the open position for continual discharge into the wetland area south of the Harborton Substation. Prior to 1985, these catch basin valves were only opened under close surveillance to permit surface water to drain from the formerly impermeably bermed AST area.</p> <ul style="list-style-type: none"> Stormwater from the former pump station area that does not infiltrate the surface flows into a catch basin/culvert, which discharges into a swale/stream south of the Substation and subsequently to the Willamette River. Prior to the late 2009 site deconstruction activities, stormwater flowed into an oil-water separator (now removed) prior to flowing into the catch basin. To the best of PGE's knowledge, after reasonable inquiry, since approximately 1981/1985 (when the fuel system was made inoperable /ASTs were emptied) the catch basin valves been left in the open position for continual discharge into the wetland area south of the Harborton Substation. Prior to 1981/1985, these catch basin valves were only opened under close surveillance to permit surface water to drain from the area. Stormwater within the distribution substation secondary containment system (liner) flows into an oil-water separator and then into piping that discharges to the swale to the south of Harborton Substation, which subsequently discharges to the Willamette River; see the document (Q19_2010_Harborton SPCC.pdf) attached in response to Question 19. Stormwater flow from outside of the lined area was not observed, instead, this stormwater infiltrates the surface. <p>Evidence of significant sediment transport from the former AST area and former pump area to the swale/stream, and subsequently the river, was not observed. The stormwater and soil erosion analysis concluded that soil erosion appears to be an ongoing but very minor process within the Harborton Substation and that the transport of soils via stormwater from the developed portions of Harborton Substation are unlikely to reach either the adjacent wetland areas or the Willamette River. For further details, see Appendix E of the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.</p> <p>See the Facility Diagram figures included in the 2003 SPCC plans for Harborton (Q19_2003-02-14 SPCC.pdf. For current conditions (i.e., post deconstruction of the oil storage yard), see the 2010 SPCC Facility Diagram for Harborton (Q19_2010_Harborton SPCC.pdf) attached in response to Question 19.</p>	
19. Provide copies of any stormwater or property drainage studies, including data from sampling, conducted at these Properties on stormwater, sheet flow, or	The current SPCC Facility Diagram (Q19_2010_Harborton SPCC.pdf) for Harborton Substation (Parcel A), post the deconstruction of the oil storage yard, is attached. Also attached is the past Harborton Substation (Parcel A) SPCC Plan and figures showing site-specific containment features; see Q19_2000-07-20 SPCC.pdf.	<p>Question 19 Attachments Q19_2000-07-20 SPCC.pdf Q19_2010_Harborton SPCC.pdf</p> <p>Also see Question 15 Attachments</p>

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surface water runoff. Also provide copies of any Stormwater Pollution Prevention, Maintenance Plans or Spill Plans developed for different operations during the Respondent's operation of each Property.	In addition to the drainage evaluations in the SPCC Plans, surface water drainage was also evaluated in the May 2010 Erosion Study; see the document Q15_2009-2010 Activity Summary Report.pdf attached in response to Question 15.	Q15_2009-2010 Activity Summary Report.pdf
Section 4.0 - Respondent's Operational Activities		
20. Describe the nature of your operation or business activities at each Property. If the operation or business activity changed over time, please identify each separate operation or activity, the dates when each operation or activity was started and, if applicable, ceased.	See the history of operations/activities at the Harborton Substation presented in Q15_2009-2010 Activity Summary Report.pdf.	See Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf
a. in general terms, the nature and quantity of the waste or material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;	<p>To the best of PGE's knowledge, after reasonable inquiry, products and materials used in the past are similar to those used currently, with the addition of other historically used materials for the operation of the turbines including, but not limited to, natural gas and distillate fuel (diesel #2, liquid). The natural gas, supplied by Northwest Natural Gas Company, was piped in. Distillate fuel may have been delivered via one of four routes: 1) delivered to the ASTs via pipelines connected directly to the SSLP/GATX oil pipelines west of the site, 2) piped in from barges at the GP docking facility and through the OFTG and Parcel C, 3) brought in by rail at the rail car unloading area, or 4) brought in by truck/trailer. To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the information on the fuel, fuel delivery, fuel storage, and fuel usage:</p> <ul style="list-style-type: none"> From 1973-1985, fuel was stored in the two ASTs, each of which had a maximum volume of 4.2 million gallons (94,000 barrels) of fuel due to floating roofs; see the attached document (Q21a_1973-05-03 Tank Capacities.pdf). The associated fuel piping and railroad spur were also installed in 1973. Although pumps may have been installed at both Harborton and Bethal to enable the pumping of oil from the ASTs, through the SPPL pipeline, between the two facilities, to the best of PGE's knowledge, after reasonable inquiry, PGE has no knowledge that this occurred. In 1972, PGE requested analytical data for fuel from Union 76; see the attached document (Q21a_1972-12-13 Union 76 Fuel Metal Levels.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE did not purchase fuel from Union 76. In 1973, PGE had Bechtel Corporation conduct reviews of fuel supply, handling, and storage facilities to evaluate the usage of fuels other than diesel #2 (i.e., high 	<p>Question 21 Attachments <u>Equipment/Material Transactions</u> Q21a_1986 Plant Decom-Sale of Harb Turbines.pdf Q21a_1973-06-25 Apollo Smoke Suppressant.pdf Q21a_1974-01-22 Smoke Abate Add Impact.pdf Q21a_1974-08-22 Smoke Abate Source Test.pdf Q21a_1975-01-20 Smoke Abate Turbs Not Fired.pdf</p> <p><u>Oil-Filled Equipment</u> Q21a_1973-04-18 Wagner-PGE SU Xformer Ship.pdf Q21a_1973-04-27 Wagner-PGE SU Xformer Tests.pdf Q21a_1973-05-04 Wagner-PGE SU Xformer Tests.pdf Q21a_1973-05-09 PGE-Wagner SU Xformer Tests.pdf Q21a_1973-11-20 Wagner-PGE SU Xformer Coil.pdf Q21a_1973-11-26 Wagner-PGE SU Xformer Coil.pdf Q21a_1973-12-14 Sta E SU Trans Loading Limits.pdf Q21a_1973 Wagner Step-up Xformer QC Reports.pdf Q21a_1973 Wagner Step-up Xformer Updates.pdf Q21a_1974-02-26 Wagner-PGE SU Xformer Repair.pdf Q21a_1974-03-11 PGE-Wagner SU Xformer Tests.pdf Q21a_1974-05-29 Wagner SU Xformer Repair Cmpl.pdf Q21a_1986-1987 Wagner Step-up Xformers Sale.pdf Q21a_1984-12-17 Oil Equip Invent List.pdf Q21a_1973-05-03 Tank Capacities.pdf</p>

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	<p>volatility fuels); see the attached document (Q21a_1973-01-05 Bechtel-PGE Fuel Report.pdf). To the best of PGE's knowledge, after reasonable inquiry, only diesel #2 fuels (as well as natural gas) were used at the Harborton facility.</p> <ul style="list-style-type: none"> • The attached 1973 document (Q21a_1973-04-24 Fuel Unloading Capability.pdf) provides the tanker unloading capabilities and the diesel oil specifications. • In 1973, PGE entered into an agreement with Hawaiian Independent Refinery for the purchase of 600,000 barrels of diesel #2 fuel for Harborton and Bethel; see the attached documents (Q21a_1973-05-14 Hawaii Oil Agreement.pdf and Q21a_1973-08-22 Hawaiian Fuel Lab Report.pdf). • The attached documents (Q21a_1973-1974 Tank #1 Fuel Loads.pdf and Q21a_1973-1974 Tank #2 Fuel Loads.pdf) show the fuel loads and delivery methods for the two Harborton ASTs between 1973 and 1974. • In 1974, AST #1 was tested for microbes; see the attached document (Q21a_1974-05-23 Microbes in Fuel.pdf). • The attached document (Q21a_1980-03-27 Fuel Use & Gen Stats.pdf) indicates that two (2) barges of fuel were shipped out from Harborton in 1979 and that one barge of fuel was received at Harborton in the first two months of 1980. • The fuel pipelines were made inoperable in 1981; see the document (Q13k_1981-04-24 Plant Decom-Status.pdf) attached in response to Question 13k. • The fuel in the ASTs was sold in 1985. The ASTs were emptied using the PGE pipeline across the BPA property and loaded into barges under US Coast Guard oversight at the GP dock. • To the best of PGE's knowledge, after reasonable inquiry, PGE only used just over 1/3 of one tank of fuel during the gas turbine operations on the property (1973-1980). <p>Associated with the smoke abatement system installed in 1973/1974, PGE purchased a fuel additive (smoke inhibitor) for injection into the fuel prior to its use in the turbines. The fuel additive, DGT-2, was purchased from Apollo Chemical Corp. However, there were operational difficulties with firing the turbines with the use of smoke abatement system and fuel additive. To the best of PGE's knowledge, after reasonable inquiry, PGE did not continue to use this system or continue to purchase/use this additive after approximately 1975. See the attached documents (Q21a_1973-06-25 Apollo Smoke Suppressant.pdf, Q21a_1974-01-22 Smoke Abate Add Impact.pdf, Q21a_1974-08-22 Smoke Abate Source Test.pdf, and Q21a_1975-01-20 Smoke Abate Turbs Not Fired.pdf) and the documents (Q13k_1973-11-29 Apollo DGT-2 System.pdf and Q13k_1973-12-13 Smoke Abate System.pdf) attached in response to Question 13k.</p> <p>From approximately 1993 to late 2009, a small quantity of miscellaneous supplies (e.g., concrete forms, concrete buckets, and nuts and bolts) was stored in the cleaned-out and cut open tanks. In late 2009, PGE removed the ASTs, fuel pump/transfer station, and associated fuel pipelines (except those that are located under roadways or concrete, which were drained and capped at both ends). A total of 4,044 gallons of old fuel/used oil and 468 gallons of oily water were removed from pipelines and sent to Thermo Fluids. River City Environmental removed 1,250 gallons of fuel/water mixture from pipelines. Also removed from the site were</p>	<p>Q21a_1972-12-13 Union 76 Fuel Metal Levels.pdf Q21a_1973-01-05 Bechtel-PGE Fuel Report.pdf Q21a_1973-04-24 Fuel Unloading Capability.pdf Q21a_1973-05-14 Hawaii Oil Agreement.pdf Q21a_1973-08-22 Hawaiian Fuel Lab Report.pdf Q21a_1973-1974 Tank #1 Fuel Loads.pdf Q21a_1973-1974 Tank #2 Fuel Loads.pdf Q21a_1974-05-23 Microbes in Fuel.pdf Q21a_1980-03-27 Fuel Use & Gen Stats.pdf</p> <p><u>Wastes</u> Q21a_1986-03-10 Plant Decom-PCBs & Asbestos.pdf Q21a_2009_Deconstruction Orders and Disposals.pdf Q21a_2009_Deconstruction Waste Summary.xls Q21a_2009_Fill Summary.pdf</p> <p>Also see Question 13 Attachments Q13k_1981-04-24 Plant Decom-Status.pdf Q13k_1986 Turbine Removal.pdf Q13k_1973-11-29 Apollo DGT-2 System.pdf Q13k_1973-12-13 Smoke Abate System.pdf</p> <p>Also see Question 15 Attachments Q15_1996-01-23 Soil Data.pdf Q15_2009-2010 Activity Summary Report.pdf Q15_1998-08-27 Water Data.pdf</p> <p>Also see Question 19 Attachments Q19_2010_Harborton SPCC.pdf</p> <p>Also see Question 52 Attachment Q52_2009_Hillsboro LF Waste Permit.pdf</p> <p>Also see Question 62 Attachments Q62_1996-06-13 AST Spill at Storage Yard.pdf Q62_1996-12-26 AST Spill at Storage Yard.pdf Q62_1997-12-03 PGE emails on Cable Crossing.pdf Q62_1997-12-04 Cable Crossing Photos.pdf Q62_1997-12-08 PGE emails on Cable Crossing.pdf Q62_1997-12-18 PGE emails on Cable Crossing.pdf</p>

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	<p>319,180 pounds of scrap metal, which were sent to Rivergate-Calbag for recycling, and several tons of general construction debris, including asphalt, concrete, and oil rags and filters, which were disposed of at Hillsboro Landfill. A single load of concrete was delivered to Fazio Landfill and Recycling. For further details, see the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15, the attached documents (Q21a_2009_Deconstruction Orders and Disposals.pdf and Q21a_2009_Deconstruction Waste Summary.xls), and the document (Q52_2009_Hillsboro LF Waste Permit.pdf) attached in response to Question 52.</p> <p><u>Equipment/Material Transactions</u></p> <ul style="list-style-type: none"> • In 1986, PGE sold the turbines to the City of Austin, Texas through a third party (Energy Services, Inc.). See Q21a_1986 Plant Decom-Sale of Harb Turbines.pdf as well as the document (Q13k_1986 Turbine Removal.pdf) attached in response to Question 13k. • In November/December 2009, PGE purchased a total of 141.43 tons of gravel (3/4-inch rock) from Knife River, Cemex, and Cipriano & Son Construction to fill in areas following the removal of site equipment, piping, concrete, asphalt, and excavations; see the attached documents (Q21a_2009_Fill Summary.pdf and Q21a_2009_Deconstruction Orders and Disposals.pdf), as well as the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15. <p><u>Oil-Filled Equipment</u></p> <p><u>Historical Power Generation</u></p> <p>During PGE's historical generating plant operations, there were two step-up transformers and three fuel pumping station transformers associated with the generating plant operations:</p> <ul style="list-style-type: none"> • Two 85 MVA, Wagner Electric Corp Step-Up Transformers (Serial Nos. 9C-1103 [PGE# 10537] and 9C-1004 [PGE# 10538]) with 5015 gallon capacities each were present at Harborton from 1973-1987. • Three 250 KVA, Allis-Chalmers Manufacturing Co Fuel Pumping Station Transformers (PGE#s 357, 358, and 359) with 54 gallon capacities each were present at Harborton from approximately 1973 until at least 1985. <p>To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the PCB content of these transformers. Repairs of the step-up transformers were required due to damage incurred during shipping and from a coil winding issue. During the coil repair for one of the transformers, a step-up transformer from Station E was used at Harborton. After the repairs were complete in 1974, the Station E step-up transformer was returned to Station E. See the attached documents (Q21a_1973-04-18 Wagner-PGE SU Xformer Ship.pdf, Q21a_1973-04-27 Wagner-PGE SU Xformer Tests.pdf, Q21a_1973-05-04</p>	

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	<p>Wagner-PGE SU Xformer Tests.pdf, Q21a_1973-05-09 PGE-Wagner SU Xformer Tests.pdf, Q21a_1973-11-20 Wagner-PGE SU Xformer Coil.pdf, Q21a_1973-11-26 Wagner-PGE SU Xformer Coil.pdf, Q21a_1973-12-14 Sta E SU Trans Loading Limits.pdf, Q21a_1973 Wagner Step-up Xformer QC Reports.pdf, Q21a_1973 Wagner Step-up Xformer Updates.pdf, Q21a_1974-02-26 Wagner-PGE SU Xformer Repair.pdf, Q21a_1974-03-11 PGE-Wagner SU Xformer Tests.pdf, and Q21a_1974-05-29 Wagner SU Xformer Repair Cmpl.pdf). In 1987, the step-up transformers were drained of oil and sold to the Montana Power Company; see the attached document (Q21a_1986-1987 Wagner Step-up Xformers Sale.pdf). To the best of PGE's knowledge, after reasonable inquiry, the drained oil from the step-up transformers was used for PGE's PCB retrofill program; see page 2 of the attached document (Q21a_1986-1987 Wagner Step-up Xformers Sale.pdf). Also see the attached 1984 and 1985 oil-equipment inventory lists for the entire facility, which includes information on these transformers (Q21a_1984-12-17 Oil Equip Invent List.pdf and Q21a_1985_Inventory Sheet for Harborton.pdf).</p> <p><u>Distribution Substation and Switchyard and Equipment Storage Yards</u> Non-leaking surplus (used) electrical equipment was stored at the east equipment storage yard from 1988 to 2002 and at the west equipment storage yard from 1992 to 2002. Non-leaking surplus (used) electrical equipment was stored at the Harborton Substation, at the east and west equipment storage yards until late 2010. Between October and December 2009, the majority of the oil-filled electrical equipment (i.e., large transformers and capacitors) was removed and transported to PGE's McLoughlin facility and/or PGE's PSC facility. In November 2010, PGE removed the remaining oil-filled electrical equipment (bushings, pole-mounted transformers, small capacitors, skid-mounted oil tank, etc.) and transported to PGE's McLoughlin facility and/or PGE's PSC facility. PGE no longer stores oil-filled electrical equipment at the Harborton storage yards.</p> <p>The attached document (Q21a_2009_Stored Oil Filled Equipment.pdf) provides a list of the surplus electrical equipment stored at the Harborton Substation in May 2009 and identifies the PCB concentrations of this equipment. This list represents is a single day "snap shot" of the types and quantity of surplus electrical equipment that were stored at the Harborton Substation; types and quantities of surplus electrical equipment varied on a day-by-day basis.</p> <p>The following summarizes the wastes generated, stored, and handled at the Harborton Substation:</p> <p><u>Historical Power Generation</u> Operation of the power turbines was conducted with direct supervision. To the best of PGE's knowledge, after reasonable inquiry, the majority of wastes produced during the historical power generation operations was maintenance waste, similar to above. Asbestos, scrap metal, turbine surge suppressors, and a non-leaking capacitor were removed from the Harborton Substation in 1986/1987; see the attached documents (Q21a_1987-2002 Bills of Lading.pdf and Q21a_1986-03-10 Plant Decom-PCBs & Asbestos.pdf). In addition, tank bottom water was drained from the tanks in</p>	

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	<p>approximately 1974 and potentially up to 1985 (when the tanks were emptied); see the attached document (Q21a_1974-05-23 Microbes in Fuel.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE no longer has knowledge of how or where the tank bottom water was disposed of.</p> <p>In addition, the water analytical data (Q15_1998-08-27 Water Data.pdf), attached in response to Question 15, may also represent filtered vault water (non-detect for TPH), prior to transport to and disposal at PSC. The paper filters and spent carbon were consolidated along with other PCB-containing materials for disposal.</p> <p><u>Spills and Releases</u> To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the spills and releases that have occurred at the Harborton Substation and the resulting wastes generated.</p> <ul style="list-style-type: none"> • August 25, 1994 — Mineral oil (liquid) from a skid-mounted tank spilled near AST #2 across an area of 38 feet by 26 feet. The spill was reported to the PGE System Control Center. A PGE internal Environmental Compliance Review (ECR), which has not been attached because it is a privileged document, indicates that the mineral oil in the tank was tested on 4 December 1995 and found to contain < 1 ppm PCBs. The soil was analyzed for TPH; see the document (Q15_1996-01-23 Soil Data.pdf) attached in response to Question 15. Several options for cleaning up the soil were evaluated; however, PGE decided to leave the soil in place because: the mineral oil was below expected oil cleanup standards (Oregon Generic Remedy; < 10,000 ppm). Subsequently, any of this soil with petroleum hydrocarbon concentrations greater than 1,000 ppm would have been removed during the 1999-2002 voluntary cleanup activities, as further described below. • December 4, 1997 — Oil samples from both tanks were tested and had concentrations of 1 ppm PCBs; see the document (Q62_1997-12-08 PGE emails on Cable Crossing.pdf) attached in response to Question 62. <p>The document (Q62_1997-12-4 Cable Crossing Photos.pdf) attached in response to Question 62 provides photographs taken on December 4, 1997 of the area. The document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 includes a sketch of the spill, as well as information that oil was also spilled over time at the foot of the transmission tower (within a fenced off area). Please note that although the document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 is dated December 3, 1997; to the best of PGE's knowledge, after reasonable inquiry, this is in error and the spill occurred on December 4, 1997.</p> <p>PGE evaluated the possibility of removing the entire cable (see the document, Q62_1997-12-18 PGE emails on Cable Crossing.pdf, attached in response to Question</p>	

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	<p>62), but instead abandoned the submerged cable in place and later removed the entire surface structure including the oil reservoirs.</p> <ul style="list-style-type: none"> January 21, 2009 – Pieces of equipment including four transformers (containing PCB containing oil ranging from less than 0.5 to 30.70 mg/L PCBs) and an oil tank (presumed less than 1.0 mg/L) leaked approximately 10 gallons of oil, spilling on an estimated area of 70 square feet of soil. The spill was reported to the EM&C, contained and cleaned up, including the removal of 5 cubic feet of soil. See Q62_012109_Harborton.pdf. August 3, 2009 – A transformer spilled approximately 5 gallons of transformer oil onto a gravel area estimating 50 square feet. The spill was reported to EM&C, contained and cleaned up, including soil removal and surface washing. The transformer PCB content sticker showed less than 1 mg/L. See Q62_080309_Harborton.pdf. December 8, 2009 – Fuel oil spilled when removing a tank and spilled approximately 15 gallons of oil onto an estimated area of 20 square feet. The spill was contained inside the tank area. PGE does not know the PCB content of the oil. See Q62_120809_Harborton.pdf. 2009/2010 – In conjunction with the removal of the oil-filled equipment from the east and west equipment storage yards, soil samples were collected and analyzed for PCBs and petroleum hydrocarbons to determine if spills or releases had occurred from the storage of oil-filled surplus equipment. The sampling identified several areas within the west equipment storage yard with petroleum hydrocarbon-impacted soil (solid). PGE elected to complete limited source removal actions (excavation and off-site disposal). On 2 December 2009, soil was excavated from seven stained areas. Approximately one load of soil, as well as general deconstruction debris, were disposed of at the Hillsboro Landfill; see the attached documents (Q21a_2009_Deconstruction Waste Summary.pdf and Q21a_2009_Deconstruction Orders and Disposals.pdf), the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15, and the document (Q52_2009_Hillsboro LF Waste Permit.pdf) attached in response to Question 52. On 27 July 2010 a total of 10 cubic yards of additional material was excavated in the vicinity of two previous excavations and disposed of at the Hillsboro Landfill. Confirmation sampling was conducted to confirm removal of petroleum contaminated material. The locations of the confirmation samples (and thus the general locations of the excavated areas) are shown in Figure 5 of the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15. 	
c. how each such waste or material	<p><u>Oil-Filled Equipment</u> During the Generating plant operations, the equipment was operated by and had maintenance</p>	<p>Question 21 Attachments Q21c 1973-03-28 PGE Org for Turbine Op & Maint.pdf</p>

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was used, purchased, generated, stored, treated, transported, disposed or otherwise handled by you; and	<p>performed by PGE personnel; see the attached document (Q21c_1973-03-28 PGE Org for Turbine Op & Maint.pdf). Non-leaking surplus electrical equipment (< 500 ppm PCBs) was stored at the Harborton Substation from 1988 to 2002. From 2002 to 2010, new and surplus electrical equipment (< 50 ppm PCBs) was stored at the Harborton Substation storage yards. Between October and December 2009, the majority of the oil-filled electrical equipment with <50 ppm PCBs (i.e., large transformers and capacitors) was removed and transported to PGE's McLoughlin facility and/or PGE's PSC facility. In November 2010, PGE removed the remaining oil-filled electrical equipment (bushings, pole-mounted transformers, small capacitors, etc.) and transported it to PGE's McLoughlin facility and/or PGE's PSC facility. PGE no longer stores oil-filled electrical equipment at the Harborton storage yards. In addition, there is/was oil-filled equipment currently and historically used in operations at the property (e.g., within the substation/switchyard and historical step-up transformers at the generating plant). See the response to Questions 16 and 21a for further details. All equipment is/was handled by trained PGE personnel.</p> <p>The Toxic Substance Control Act (TSCA) regulation standard and accepted industry standard is to use the term "non-PCB" to describe oils with < 50 ppm PCBs; this term is used throughout this document.</p>	
21. At each Property, did you ever use, purchase, generate, store, treat, dispose, or otherwise handle any waste, or material? If the answer to the preceding question is anything but an unqualified "no," identify:		
a. in general terms, the nature and quantity of the waste or material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;	<p><u>Maintenance Building</u> See the attached available waste disposal documents (Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf).</p> <p><u>Wastes</u> The companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers revised.pdf) attached in response to Question 40.</p>	<p>Question 21 Attachments Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf</p> <p>Question 40 Attachments Q40_Waste-Materials Receivers and Carriers revised.pdf</p>
c. the nature, including the chemical content, characteristics, physical state (e.g., solid, liquid) and quantity (volume and weight) of all materials involved in	To the best of PGE's knowledge, after reasonable inquiry, disposal/recycling facilities with which PGE has made arrangements for disposal/recycling of wastes for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers revised.pdf) attached in response to Question 40.	Question 40 Attachments Q40_Waste-Materials Receivers and Carriers revised.pdf

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each such arrangement;		
<p>25. Please describe the years of use, purpose, quantity, and duration of any application of pesticides or herbicides on each Property during the period of investigation (1937 to the present). Provide the brand name of all pesticides or herbicides used.</p>	<p>See the attached document (Q25_HarbortonHerbAppHistory.pdf) for further details on the known herbicide application history from 1979 through 2007. In 2009 and 2010, two herbicide blends (i.e., Streamline and Plainview) were applied at two areas at Harborton Substation in order to test their efficacy. The herbicides were applied by the Willber-Ellis Company (9685 SW Ridder Road, Suite 190, Wilsonville, OR, 97070). To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the recent applications of these herbicide blends at Harborton Substation:</p> <p><u>May 2009</u> Area 1 – DuPont's Streamline (a blend of MAT28 [aminocyclopyrachlor] and Escort [metsulfuron methyl]) was applied (single application) along the access road running north from site entrance (outside the fenced area) across an area approximately 400 feet long and 10 feet wide on each side of the road. A total of 1.54 dry ounces was applied to the approximately 0.09 acre area.</p> <p>Area 2 – DuPont's Plainview (a blend of MAT28, Oust [sulfometuron methyl], and Telar [chlorsulfuron]) was applied (single application) adjacent to Area 1 and outside of the fence along the PGE Pole Yard across an area approximately 300 feet long and 25 feet wide. A total of 0.46 dry ounces was applied to the approximately 0.17 acre area.</p> <p><u>June 2010</u> Area 2 – DuPont's Plainview was applied (single application) to half of Area 2 (same Area 2 as the 2009 application). A total of 0.23 dry ounces was applied to the approximately 0.085 acre area.</p>	<p>Question 25 Attachment Q25_HarbortonHerbAppHistory.pdf</p>
<p>26. Describe how wastes transported off the Property for disposal are and ever were handled, stored, and/or treated prior to transport to the disposal facility.</p>	<p>For further waste information, see the documents Q15_2009-2010 Activity Summary Report.pdf.</p>	<p>See Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf</p>
<p>27. Has Respondent ever arranged for disposal or treatment or arranged for transportation for disposal or treatment of materials to any Property (including the</p>		

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Willamette River) within the Investigation Area? If so, please identify every Property that Respondent's materials were disposed or treated at in the Investigation Area. In addition, identify:		
a. the persons with whom the Respondent made such arrangements;	<p>Currently, PGE's waste and material handling facilities are PSC and Wilsonville (only soil/gravel with < 50 ppm PCBs) located outside of the Investigation Area.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, General Electric Company and Calbag Metals are the only companies that have been identified as both within the Investigation Area and having received waste from the Harborton Substation based on the response and documents attached in response to Question 21a. Calbag Metals received approximately 319,180 pounds of scrap metal; see the documents (Q21a_2009_Deconstruction Waste Summary.pdf, Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf and Q21a_2009_Deconstruction Orders and Disposals.pdf) attached in response to Question 21.</p>	<p>Also see Question 21 Attachments Q21a_2009_Deconstruction Waste Summary.pdf Q21a_2009_Deconstruction Orders and Disposals.pdf Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf</p>
b. every date on which Respondent made such arrangements;	<p>The only companies positively identified by PGE as having received waste or used material from the Harborton substation are GE and Calbag Metals. In late 2009, Calbag Metals received approximately 319,180 pounds of scrap metal; see the documents (Q21a_2009_Deconstruction Waste Summary.pdf, Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf and Q21a_2009_Deconstruction Orders and Disposals.pdf) attached in response to Question 21.</p>	<p>See Question 21 Attachment Q21a_2009_Deconstruction Waste Summary.pdf Q21a_2009_Deconstruction Orders and Disposals.pdf Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf</p>
c. the nature, including the chemical content, characteristics, physical state (e.g., solid, liquid) and quantity (volume and weight) of all materials involved in each such arrangement;	<p>To the best of PGE's knowledge, after reasonable inquiry, General Electric Company and Calbag Metals are the only companies that have been identified by PGE as having received waste or used material from the Harborton Substation based on the response and documents for Question 21a. In late 2009, Calbag Metals received approximately 319,180 pounds of scrap metal; see the documents (Q21a_2009_Deconstruction Waste Summary.pdf, Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf and Q21a_2009_Deconstruction Orders and Disposals.pdf) attached in response to Question 21.</p>	<p>See Question 21 Attachments Q21a_2009_Deconstruction Waste Summary.pdf Q21a_2009_Deconstruction Orders and Disposals.pdf Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf</p>
a. the date such operations commenced and concluded; and	<p>The following summarizes the major Harborton Substation (Parcel A) operations:</p> <ul style="list-style-type: none"> • Spill response and clean up - Cleanup of impacted soils occurred in 2009/2010 in the west equipment storage yard after the removal of the oil-filled electrical equipment (i.e., transformers). Spilled PCB containing oil contamination levels ranged from non-detect (at a detection limit of less than 5 ppm) to 51 ppm. • Removal of the ASTs, fuel pump/transfer station, rail fuel risers, and associated fuel pipelines (except those that are located under roadways or concrete, which were drained and capped at both ends) – late 2009. 	
b. the types of work performed at each location, including but not limited to the industrial, chemical, or institutional processes undertaken at each	<p><u>Generating Plant and Fuel Transfer</u> Removal of the ASTs, fuel pump/transfer station, and associated fuel pipelines (except those that are located under roadways or concrete, which were drained and capped at both ends).</p>	<p>See all Question 29 Attachments</p>

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29. Provide a schematic diagram or flow chart that fully describes and/or illustrates the Respondent's operations on each Property.	See the attached documents (Q29_Harborton Operations Schematic revised.pdf)	Question 29 Attachments Q29_Harborton Operations Schematic revised.pdf
33. Provide copies of Material Safety Data Sheets (MSDS) for materials used in the Respondent's operations.	The attached documents (Q33_Escort MSDS.pdf, Q33_MAT28 MSDS.pdf, Q33_OUST MSDS.pdf, and Q33_Telar MSDS.pdf) provide the MSDS for the herbicides applied at Harborton Substation in 2009 and 2010; see the response to Question 25 for further details.	Question 33 Attachment Q33_Escort MSDS.pdf Q33_MAT28 MSDS.pdf Q33_OUST MSDS.pdf Q33_Telar MSDS.pdf
34. Describe the cleaning and maintenance of the equipment and machinery involved in these operations, including but not limited to:	Historical Maintenance and Cleaning Activities: In general, similar to current substation electrical equipment maintenance and cleaning activities, but included maintenance and cleaning of engines, turbines, and generators. The document (Q21c_1973-03-28 PGE Org for Turbine Op & Maint.pdf) attached in response to Question 21c provides information on the operation and maintenance of the Harborton turbine plant.	Also see Question 21 Attachment Q21c_1973-03-28 PGE Org for Turbine Op & Maint.pdf
36. For each type of waste (including by-products) from Respondent's operations, including but not limited to all liquids, sludges, and solids, provide the following information:	<p>Remediation wastes include:</p> <p><u>Spill/Release Responses</u></p> <ul style="list-style-type: none"> • Soil, gravel and/or absorbent materials – solid, petroleum hydrocarbons and/or PCBs, brown/black, petroleum hydrocarbon odor, various quantities, 1988 to 2009. For further details regarding known spills and releases at the Harborton Substation, see the response and documents attached for Question 62, as well as the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15. <p>General materials/wastes not contaminated with PCBs include:</p> <ul style="list-style-type: none"> • Tank bottom water – liquid, water with some diesel oil, petroleum hydrocarbon smell, unknown quantity, 1974-1985 (at the latest) 	See Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf
a. its physical state;		
b. its nature and chemical composition;		
c. its color;		
d. its odor.		
e. the approximate monthly and annual volumes of each type of waste (using such measurements as gallons, cubic yards, pounds, etc.); and		
f. the dates (beginning & ending) during which each type of waste was produced by Respondent's operations.		

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40. Provide copies of such contracts and other documents reflecting such agreements or arrangements, including but not limited to:		
e. indicate the ultimate disposal/recycling/treatment location for each type of waste.	To the best of PGE's knowledge, after reasonable inquiry, all companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the attached document (Q40_Waste-Materials Receivers and Carriers revised.pdf).	Question 40 Attachments Q40_Waste-Materials Receivers and Carriers revised.pdf
48. For each process or activity identified in response to the previous Question, describe the dates and duration of the activity or process and the quantity and type of PCB(s) or PCB(s) containing materials or liquids.		
a. the manufacturer and serial number of each transformer;	<u>Gas Turbine Maintenance</u> There were several step-up transformers and fuel pumping station transformers that were associated with the Generating Plant and Fuel Pumping Facility operations:	
b. the quantity of oil in each transformer;	<ul style="list-style-type: none"> 2 Step-Up Transformers: Wagner Electric Corp, 85 MVA, Serial Nos. 9C-1103 (PGE# 10537) and 9C-1004 (PGE# 10538), 5015 gallon capacities each, and present at Harborton from 1973-1987. 	
c. the concentrations of PCB contained in the transformer oil;	<ul style="list-style-type: none"> 3 Fuel Pumping Station Transformers: Allis-Chalmers Manufacturing Co, 250 KVA, Serial Nos. unknown (PGE#s 357, 358, and 359), 54 gallon capacities each, present at Harborton from approximately 1973 until at least 1985. 	
d. the time period or periods in which these transformers were sent to the Property;	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the quantity of oil or concentrations of PCBs in the oil for these two transformers. In 1987, the step-up transformers were drained of oil and sold to the Montana Power Company; see the attached document (Q21a_1986-1987 Wagner Step-up Xformers Sale.pdf). For further details, see the response and documents (Q21a_1973-04-18 Wagner-PGE SU Xformer Ship.pdf, Q21a_1973-04-27 Wagner-PGE SU Xformer Tests.pdf, Q21a_1973-05-04 Wagner-PGE SU Xformer Tests.pdf, Q21a_1973-05-09 PGE-Wagner SU Xformer Tests.pdf, Q21a_1973-11-20 Wagner-PGE SU Xformer Coil.pdf, Q21a_1973-11-26 Wagner-PGE SU Xformer Coil.pdf, Q21a_1973-12-14 Sta E SU Trans Loading Limits.pdf, Q21a_1973 Wagner Step-up Xformer QC Reports.pdf, Q21a_1973 Wagner Step-up Xformer Updates.pdf, Q21a_1974-02-26 Wagner-PGE SU Xformer Repair.pdf, Q21a_1974-03-11 PGE-Wagner SU Xformer Tests.pdf, and Q21a_1974-05-29 Wagner SU Xformer Repair Cmpl.pdf, Q21a_1984-12-17 Oil Equip Invent List.pdf, and Q21a_1985_Inventory Sheet for Harborton.pdf) for Question 21a.</p>	<p>See Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf</p> <p>Also see all Question 21 Attachments</p> <p>Also see Question 62 Attachments Q62_1996-06-13 AST Spill at Storage Yard.pdf Q62_1996-12-26 AST Spill at Storage Yard.pdf Q62_1997-12-03 PGE emails on Cable Crossing.pdf Q62_1997-12-04 Cable Crossing Photos.pdf Q62_1997-12-08 PGE emails on Cable Crossing.pdf Q62_1997-12-18 PGE emails on Cable Crossing.pdf</p>

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	<p>For the sale of the power turbines in 1986, PGE removed and disposed of the PCB-containing turbine surge suppressors; see the attached document (Q21a_1986-03-10 Plant Decom-PCBs & Asbestos.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE no longer knows to whom these surge suppressors were sent for disposal.</p> <p>There may have been other oil-filled electrical equipment associated with the Generating Plant operations, which may have been contaminated with PCB's during routine maintenance (e.g., lubricating oil). To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the manufacturer, serial number, quantity of oil, and concentrations of PCBs, if any, of other oil-filled equipment that may have been associated with the generating turbines. For oil-filled equipment associated with the Harborton substation and switchyard, see the text below.</p> <p><u>Substation and Switchyard Equipment Operation and Routine Maintenance</u> See the document Q21a_1984-12-17 Oil Equip Invent List.pdf.</p> <p><u>Equipment Storage</u> From 2002 to late 2009, the east and west equipment storage yards were used to store surplus (used) electrical equipment (< 50 ppm PCBs). The document (Q21a_2009_Stored Oil Filled Equipment.pdf) attached in response to Question 21 lists the equipment stored in these yards in May 2009.</p> <p>Between October and December 2009, the majority of the oil-filled electrical equipment (i.e., large transformers and capacitors) were removed and transported to PGE's McLoughlin facility and/or PGE's PSC facility. In November 2010, PGE removed the remaining oil-filled electrical equipment (bushings, pole-mounted transformers, small capacitors, etc.) and transported it to PGE's McLoughlin facility and/or PGE's PSC facility. See the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15. PGE no longer stores oil-filled electrical equipment at the Harborton storage yards.</p>	
g. information on any other oil filled electrical equipment at the Property, and;	From 1973 to 1985, the ASTs contained distillate fuel (diesel #2). The ASTs were emptied in 1985 and removed in late 2009. In addition, a skid-mounted oil tank was stored in the west equipment storage yard until its removal in November 2010. For further details, see the response to Question 16.	
h. complete copies of any contracts, invoices, receipts, or other documents related to the transformers or other oil filled electrical equipment to the Property.	To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in and Figure 3 of the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.	See Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf
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50. Identify all federal, state and local authorities that regulated the owner or operator of each Property and/or that	<p>The primary federal, state and local agencies that have regulated PGE at the Harborton Substation (Parcel A) and Parcel B and the fuel transfer facility at the GP dock include:</p> <ul style="list-style-type: none"> • DSL: Leased aquatic lands and Harborton diking and filing notification • Oregon Department of Environmental Quality (DEQ), including the Environmental 	<p>Question 50 Attachments</p> <p>Q50_1970-01-01 CWAPA Prohibited Practices.pdf</p> <p>Q50_1971-10-14 PGE-CWAPA Turbine Data.pdf</p> <p>Q50_1972-11-02 PUC-PGE Notice of Hearing.pdf</p>

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<p>interacted with the owner or operator of each Property. Your response is to address all interactions and in particular all contacts from agencies/departments that dealt with health and safety issues and/or environmental concerns.</p>	<p>Quality Commission: spills, product/waste disposal, facility enhancements, air permits, remedial investigation</p> <ul style="list-style-type: none"> • Oregon Department of Commerce (ODOC), Boiler and Pressure Vessel Division: power generating plant fuel filter and strainer vessels • Oregon Fish Commission: Harborton diking and filing notification • Oregon Public Utility Commission (OPUC): regulatory oversight of the historical power generation plant, air permits • Port of Portland: Harborton diking and filing notification • Securities and Exchange Commission: Turbine leases • U.S. Army Corp of Engineers (USACE): wetlands and Harborton diking and filing notification • U.S. Coast Guard (USCG): spills and PGE fuel transfer facility operations at the GP dock • U.S. Environmental Protection Agency (USEPA): stationary turbine regulations, Portland Harbor Superfund Site, Emergency Planning & Community Right-to-Know Act (EPCRA), TSCA 	<p>Q50_1972-12-27 BN-PUC Track Permit Withdrawl.pdf Q50_1972 CWAPA Correspondances.pdf Q50_1972 DEQ Correspondances.pdf Q50_1973-03-12 D&M-COP PFB AST Dike.pdf Q50_1973-04-30 PGE-EPA Proposed Regs.pdf Q50_1973-1979_PGE-DEQ Turbine Use.pdf Q50_1973 COP Correspondances.pdf Q50_1973 CWAPA Correspondances.pdf Q50_1973 DEQ Correspondances.pdf Q50_1974-08-09 ODOC-PGE Fuel Filters.pdf Q50_1974-08-21 PGE-ODOC Fuel Filters.pdf Q50_1974 COP Correspondances.pdf Q50_1974 DEQ Correspondances.pdf Q50_1975 EQC Authorization for Public Hearing revised.pdf Q50_1975 COP Correspondances.pdf Q50_1975 DEQ Correspondances.pdf Q50_1976-10-13 PUC-PGE Harb Study Outline.pdf Q50_1976 COP Correspondances.pdf Q50_1976 DEQ Correspondances.pdf Q50_1977 COP Correspondances.pdf Q50_1977 DEQ Correspondances.pdf Q50_1978_DEQ Air Permit Stipulations.pdf Q50_1979-11-16 PGE-COP Emerg Op Request.pdf Q50_1979_Oregon Clean Air Imp Plan.pdf Q50_1980-03-05 ODOE Siting of Power Plants.pdf</p> <p>Also see Question 4 Attachment Q04g_1974-05-02 USCG-PGE Operations Manual.pdf</p>
<p>51. Describe all occurrences associated with violations, citations, deficiencies. and/or accidents concerning each Property during the period being investigated related to health and safety issues and/or environmental concerns. Provide copies of all documents associated with each occurrence described.</p>	<p>PGE's turbine operations (intermittent from 1973-1980) were not able to meet all of the air discharge permit parameters, which resulted in exceedances of noise, nitrogen oxide (NOx), carbon monoxide (CO), smoke opacity, and/or particulates during emergency/high use operations under conditional use permits. During these events, PGE communicated with CWAPA/DEQ while attempting to correct the issues to the extent possible (e.g., NOx reduction evaluations, mufflers, and smoke abatement fuel additives); see the response and documents for Questions 50 and 52.</p>	<p>Also see Question 50 Attachments Q50_1972 CWAPA Correspondances.pdf Q50_1972 DEQ Correspondances.pdf Q50_1973-1979_PGE-DEQ Turbine Use.pdf Q50_1973 CWAPA Correspondances.pdf Q50_1973 DEQ Correspondances.pdf Q50_1974 DEQ Correspondances.pdf Q50_1975 DEQ Correspondances.pdf Q50_1976 DEQ Correspondances.pdf Q50_1977 DEQ Correspondances.pdf</p>

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		<p>Also see Question 52 Attachments</p> <p><u>Air Permits</u></p> <p>Q52_1973 Application for Air Contam Discharge Permit.pdf Q52_1973-03-07 CWAPA Air Permit Appl.pdf Q52_1973-07-11 PGE-COP Condit Use Appl.pdf, Q52_1973-09-25 DEQ Air Permit.pdf, Q52_1974-11-06 DEQ Air Permit Addendum.pdf, Q52_1975-06-24 DEQ Air Permit Add Mod 1.pdf, Q52_1975-07-11 DEQ Air Permit Renewal Appl.pdf, Q52_1975-10-09 DEQ Air Permit Add Mod 2.pdf, Q52_1975-11-21 DEQ Air Permit Add Mod 3.pdf, Q52_1979-11-28 COP Ord No. 148793 - Cond Use Permit.pdf Q52_1979 Air Contaminant Discharge Permit.pdf Q52_1979 DEQ to PGE_Special Discharge Permit.pdf Q52_1979 DEQ Special Operations Permit.pdf Q52_1983 DEQ Special Letter Permit.pdf</p>
<p>52. Provide a list of all local, state and federal environmental permits ever issued to the owner or operator on each Property (e.g., RCRA permits. NPDES permits, etc.). Please provide a copy of each federal and state permit, and the applications for each permit, ever issued to the owner or operator on each Property.</p>	<p>In prior years, the following environmental permits have been requested and/or issued for the Harborton Substation:</p> <ul style="list-style-type: none"> • In 1971, PGE received approval from the COP City Planning Commission for the diking and filling activities at the Harborton Substation (Parcel A); see the attached document (Q52_1971-11-23 CPC Diking & Filing Approval.pdf). • PGE obtained air discharge permits and conditional use permits for the operation for the gas turbines (1973 to 1980); see Q52_1973-03-07 CWAPA Air Permit Appl.pdf, Q52_1973-07-11 PGE-COP Condit Use Appl.pdf, Q52_1973-09-25 DEQ Air Permit.pdf, Q52_1974-11-06 DEQ Air Permit Addendum.pdf, Q52_1975-06-24 DEQ Air Permit Add Mod 1.pdf, Q52_1975-07-11 DEQ Air Permit Renewal Appl.pdf, Q52_1975-10-09 DEQ Air Permit Add Mod 2.pdf, Q52_1975-11-21 DEQ Air Permit Add Mod 3.pdf, and Q52_1979-11-28 COP Ord No. 148793 - Cond Use Permit.pdf. Also see the Harborton Permit Chronology presented in the attached document (Q52_1970-1975 Harb Permit Chronology.pdf). • In 1973, PGE received approval (a NPDES permit was not required) from DEQ for the discharge of 4,200,000 gallons of hydrostatic test water from the ASTs to the Willamette River; see the attached document (Q52_1973-07-16 DEQ Tank Test Water Discharge.pdf). This test was conducted prior to the filling of the tanks with fuel and the water would not have contained anything, except possibly rust. • PGE obtained conditional use and building permits/authorization for the development of the Harborton Substation; see Q52_1972-07-24 COP Permit Appl - Switchyard 	<p>Question 52 Attachments</p> <p>Q52_1970-1975 Harb Permit Chronology.pdf Q52_1971-11-23 CPC Diking & Filing Approval.pdf Q52_1973-07-16 DEQ Tank Test Water Discharge.pdf Q52_2009_Hillsboro LF Waste Permit.pdf</p> <p><u>Air Permits</u></p> <p>Q52_1973-03-07 CWAPA Air Permit Appl.pdf Q52_1973-07-11 PGE-COP Condit Use Appl.pdf, Q52_1973-09-25 DEQ Air Permit.pdf, Q52_1974-11-06 DEQ Air Permit Addendum.pdf, Q52_1975-06-24 DEQ Air Permit Add Mod 1.pdf, Q52_1975-07-11 DEQ Air Permit Renewal Appl.pdf, Q52_1975-10-09 DEQ Air Permit Add Mod 2.pdf, Q52_1975-11-21 DEQ Air Permit Add Mod 3.pdf, Q52_1979-11-28 COP Ord No. 148793 - Cond Use Permit.pdf</p> <p><u>Other Permits</u></p> <p>Q52_1972-07-24 COP Permit Appl - Switchyard Grading.pdf Q52_1972-09-15 COP Permit Appl - Turbine Found & Pilings.pdf Q52_1973-01-29 CWAPA Permit - ASTs.pdf Q52_1973-02-16 COP Permit Appl - Fence.pdf</p>

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	<p>Grading.pdf, Q52_1972-09-15 COP Permit Appl - Turbine Found & Pilings.pdf, Q52_1973-01-29 CWAPA Permit - ASTs.pdf, Q52_1973-02-16 COP Permit Appl - Fence.pdf, Q52_1973-02-16 CPS Permit Req - ASTs.pdf, Q52_1973-04-24 COP Permit Appl - Control House.pdf, Q52_1973-05-09 COP Permit Appl - Maint Bldg.pdf, Q52_1973-05-11 COP Ord 136486 - AST Const Permit.pdf, Q52_1973-05-11 COP Permit Appl - ASTs.pdf, Q52_1973-08 DEQ Permit Appl to Const-Smoke Abate.pdf, and Q52_1973-10-10 COP Permit Appl-Turb Encl&Control Mod.pdf.</p> <p>Non-environmental permits have been issued for the Harborton Property. To the best of PGE's knowledge, after reasonable inquiry, these have included:</p> <ul style="list-style-type: none"> Non-hazardous waste permits for disposal of petroleum contaminated soil at the Hillsboro Landfill; see the attached document (Q52_2009_Hillsboro LF Waste Permit.pdf). 	<p>Q52_1973-02-16 CPS Permit Req - ASTs.pdf Q52_1973-04-24 COP Permit Appl - Control House.pdf Q52_1973-05-09 COP Permit Appl - Maint Bldg.pdf Q52_1973-05-11 COP Ord 136486 - AST Const Permit.pdf Q52_1973-05-11 COP Permit Appl - ASTs.pdf Q52_1973-08 DEQ Permit Appl to Const-Smoke Abate.pdf Q52_1973-10-10 COP Permit Appl-Turb Encl&Control Mod.pdf</p>
55. Provide all RCRA Identification Numbers issued to Respondent by EPA or a state for Respondent's operations.	The EPA ID ORD980665376, listed on the hazardous waste manifests (Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf) attached in response to Question 21a, corresponds to the PSC, a PGE waste and material handling facility.	See Question 21a Attachment Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf
56. Identify all federal offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which such information was sent/filed.	See the documents (Q21a_1987-2002 Bills of Lading.pdf and Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf) attached in response to Question 21a	See Question 21a Attachment Q21a_Haz Waste Manifests_Harborton_1992-2003 revised.pdf
Section 6.0 - Releases and Remediation		
62. Identify all leaks, spills, or releases into the environment of any waste, including petroleum, hazardous substances, pollutants, or contaminants, that have occurred at or from each Property, which includes any aquatic lands owned or leased by Respondent. In addition, identify and provide copies of any documents regarding: a. when such releases occurred;	<p>To the best of PGE's knowledge, after reasonable inquiry, the attached documents provide information describing the known leaks, spills, or releases to the environment at the Harborton Substation (Parcel A). Also see the documents (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15. To the best of PGE's knowledge, after reasonable inquiry, no waste, materials, or process residues have leaked, spilled, or been released to the Willamette River from the Harborton Substation. The following addresses the specific releases and spills that have occurred at the Harborton Substation.</p> <ul style="list-style-type: none"> August 25, 1994 — Mineral oil from a skid-mounted tank spilled near AST #2 across an area of 38 feet by 26 feet; see the attached maintenance request form (Q62_1994-08-25_Spill Report.pdf). The spill did not contact water. The spill was reported to the PGE System Control Center. A PGE internal ECR, which has not been 	<p>Question 62 Attachments Q62_1996-06-13 AST Spill at Storage Yard.pdf Q62_1996-12-26 AST Spill at Storage Yard.pdf Q62_1997-12-03 PGE emails on Cable Crossing.pdf Q62_1997-12-04 Cable Crossing Photos.pdf Q62_1997-12-08 PGE emails on Cable Crossing.pdf Q62_1997-12-18 PGE emails on Cable Crossing.pdf Q62_012109_Harborton.pdf Q62_080309_Harborton.pdf Q62_120809_Harborton.pdf</p>

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<p>b. how the releases occurred (e.g. when the substances were being stored, delivered by a vendor, transported or transferred (to or from any tanks, drums, barrels, or recovery units), and treated);</p> <p>c. the amount of each hazardous substances, pollutants, or contaminants so released;</p> <p>d. where such releases occurred;</p> <p>e. any and all activities undertaken in response to each such release or threatened release, including the notification of any agencies or governmental units about the release;</p> <p>f. any and all investigations of the circumstances, nature, extent or location of each release or threatened release including, the results of any soil, water (ground and surface), or air testing undertaken;</p> <p>g. all persons with information relating to these releases; and</p> <p>h. list all local, state, or federal departments or agencies notified of the release, if applicable;</p>	<p>attached because it is a privileged document, indicates that the mineral oil in the tank was tested on 4 December 1995 and found to contain < 1 ppm PCBs, while the attached PGE memo (Q62_1996-12-26 Old Spill at Storage Yard.pdf) notes that the oil did not contain PCBs. The soil was analyzed for TPH; see the document (Q15_1996-01-23 Soil Data.pdf) attached in response to Question 15. Several options for cleaning up the soil were evaluated; however, PGE decided to leave the soil in place because the mineral oil was below expected oil cleanup standards (Oregon Generic Remedy; < 10,000 ppm), naturally degrades over time, and was not impacting any surface water or groundwater; see the attached documents (Q62_1996-06-13 AST Spill at Storage Yard.pdf and Q62_1996-12-26 AST Spill at Storage Yard.pdf). Subsequently, any of this soil with petroleum hydrocarbon concentrations greater than 1,000 ppm would have been removed during the 1999-2002 voluntary cleanup activities, as further described below.</p> <ul style="list-style-type: none"> December 4, 1997 — An above ground oil tank associated with a non-functioning submerged cable was vandalized, resulting in a release of approximately 40 gallons of cable oil (liquid) onto the soil (solid) in Parcel C; see the attached document (Q62_1997-12-04_Spill Report.pdf). The following day, a second spill report was completed suggesting a second spill occurred in the same area. Oil samples from both tanks were tested and had concentrations of 1 ppm PCBs; see the attached document (Q62_1997-12-08 PGE emails on Cable Crossing.pdf). <p>The attached document (Q62_1997-12-4 Cable Crossing Photos.pdf) provides photographs taken on December 4, 1997 of the area. The document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) includes a sketch of the spill, as well as information that oil was also spilled over time at the foot of the transmission tower (within a fenced off area). Please note that although the document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) is dated December 3, 1997; to the best of PGE's knowledge, after reasonable inquiry, this is in error and the spill occurred on December 4, 1997.</p> <p>PGE evaluated the possibility of removing the entire cable (see the attached document Q62_1997-12-18 PGE emails on Cable Crossing.pdf), but instead abandoned the submerged cable in place and removed the entire surface structure including the oil reservoirs.</p> <ul style="list-style-type: none"> January 21, 2009 – Pieces of equipment including four transformers (containing PCB containing oil ranging from less than 0.5 to 30.70 mg/L PCBs) and an oil tank (presumed less than 1.0 mg/L) leaked approximately 10 gallons of oil, spilling on an estimated area of 70 square feet of soil. The spill was reported to the EM&C, contained and cleaned up, including the removal of 5 cubic feet of soil. See Q62_012109_Harborton.pdf. 	<p>Also see Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf</p> <p>Also see all Question 21 Attachments Q21a_2009_Deconstruction Waste Summary.pdf Q21a_2009_Deconstruction Orders and Disposals.pdf</p> <p>Also see Question 52 Attachment Q52_2009_Hillsboro LF Waste Permit.pdf</p>

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	<ul style="list-style-type: none"> August 3, 2009 – A transformer spilled approximately 5 gallons of transformer oil onto a gravel area estimating 50 square feet. The spill was reported to EM&C, contained and cleaned up, including soil removal and surface washing. The transformer PCB content sticker showed less than 1 mg/L. See Q62_080309_Harborton.pdf. December 8, 2009 – Fuel oil spilled when removing a tank and spilled approximately 15 gallons of oil onto an estimated area of 20 square feet. The spill was contained inside the tank area. PGE does not know the PCB content of the oil. See Q62_120809_Harborton.pdf. 2009/2010 – In conjunction with the removal of the oil-filled equipment from the east and west equipment storage yards, soil samples were collected and analyzed for PCBs and petroleum hydrocarbons to determine if spills or releases had occurred from the storage of oil-filled surplus equipment. The sampling identified several areas within the west equipment storage yard with petroleum hydrocarbon-impacted soil, at which PGE elected to complete limited source removal actions (excavation and off-site disposal). On 2 December 2009, soil was excavated from seven stained areas. Approximately one load of soil, as well as general deconstruction debris, were disposed of at the Hillsboro Landfill; see the documents (Q21a_2009_Deconstruction Waste Summary.pdf and Q21a_2009_Deconstruction Orders and Disposals.pdf) attached in response to Question 21, the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15, and the document (Q52_2009_Hillsboro LF Waste Permit.pdf) attached in response to Question 52. On 27 July 2010 a total of 10 cubic yards of additional material was excavated in the vicinity of two previous excavations and disposed of at the Hillsboro Landfill. Confirmation sampling was conducted to confirm removal of petroleum contaminated material. The locations of the confirmation samples (and thus the general locations of the excavated areas) are shown in Figure 5 of the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15. 	
64 Has any contaminated soil ever been excavated or removed from the Property Unless the answer to the preceding question is anything besides an unequivocal no identify and provide copies of any documents regarding:		
a. amount of soil excavated;	To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the contaminated soil excavations that have occurred at Harborton Substation during spill response actions and the 2001 Pre-RI remedial action:	See Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf Also see Question 21 Attachments

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	<ul style="list-style-type: none"> August 25, 1994 — Mineral oil from a skid-mounted tank spilled near AST #2 across an area of 38 feet by 26 feet. The soil was analyzed for TPH; see the document (Q15_1996-01-23 Soil Data.pdf) attached in response to Question 15. Several options for cleaning up the soil were evaluated; however, PGE decided to leave the soil in place because the mineral oil was below expected oil cleanup standards (Oregon Generic Remedy; < 10,000 ppm), naturally degrades over time, and was not impacting any surface water or groundwater. Subsequently, any of this soil with petroleum hydrocarbon concentrations greater than 1,000 ppm would have been removed during the 1999-2002 voluntary cleanup activities, as further described below. December 4, 1997 —Samples from both tanks were tested and had concentrations of 1 ppm PCBs; see the document (Q62_1997-12-08 PGE emails on Cable Crossing.pdf) attached in response to Question 62. <p>The document (Q62_1997-12-4 Cable Crossing Photos.pdf) attached in response to Question 62 provides photographs taken on December 4, 1997 of the area. The document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 includes a sketch of the spill, as well as information that oil was also spilled over time at the foot of the transmission tower (within a fenced off area). Please note that although the document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 is dated December 3, 1997; to the best of PGE's knowledge, after reasonable inquiry, this is in error and the spill occurred on December 4, 1997.</p> <p>PGE evaluated the possibility of removing the entire cable (see the document, Q62_1997-12-18 PGE emails on Cable Crossing.pdf, attached in response to Question 62), but instead abandoned the submerged cable in place and removed the entire surface structure including the oil reservoirs.</p> <ul style="list-style-type: none"> 2009/2010 – In conjunction with the removal of the oil-filled equipment from the east and west equipment storage yards, soil samples were collected and analyzed for PCBs and petroleum hydrocarbons to determine if spills/releases had occurred from the storage of oil-filled surplus equipment. The sampling identified several areas within the west equipment storage yard with petroleum hydrocarbon-impacted soil. PGE elected to complete limited source removal actions (excavation and off-site disposal). On 2 December 2009, soil was excavated from seven stained areas. Approximately one load of soil, as well as general deconstruction debris, were disposed of at the Hillsboro Landfill; see the documents (Q21a_2009_Deconstruction Waste Summary.pdf and Q21a_2009_Deconstruction Orders and Disposals.pdf) attached in response to Question 21, the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15, and the document (Q52_2009_Hillsboro LF Waste Permit.pdf) attached in response to Question 52. On 27 July 2010 a total of 10 cubic yards of additional material was excavated in the 	<p>Q21a_2009_Deconstruction Waste Summary.pdf Q21a_2009_Deconstruction Orders and Disposals.pdf</p> <p>Also see Question 52 Attachment Q52_2009_Hillsboro LF Waste Permit.pdf</p> <p>Also see Question 62 Attachments Q62_1996-06-13 AST Spill at Storage Yard.pdf Q62_1996-12-26 AST Spill at Storage Yard.pdf Q62_1997-12-03 PGE emails on Cable Crossing.pdf Q62_1997-12-04 Cable Crossing Photos.pdf Q62_1997-12-08 PGE emails on Cable Crossing.pdf Q62_1997-12-18 PGE emails on Cable Crossing.pdf</p>

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	vicinity of two of the previous excavations and disposed of at the Hillsboro Landfill. Confirmation sampling was conducted to confirm removal of petroleum contaminated material. The locations of the confirmation samples (and thus the general locations of the excavated areas) are shown in Figure 5 of the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.	
b. location of excavation presented on a map or aerial photograph;	As described above, the locations of the 2009/2010 confirmation samples, and thus the general locations of the excavated areas in 2009/2010, are shown in Figure 5 of the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.	See Question15 Attachments Q15_2009-2010 Activity Summary Report.pdf
e. identity of persons who excavated or removed the soil, if other than a contractor for Respondent;	The 2009/2010 deconstruction and excavation activities were conducted by Baseline Construction, Inc.	
h. all analyses or tests and results of analyses of the soil that was removed from the Property;	The analyses of soils sampled during the 2009/2010 activities are provided in Appendix D of the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.	See Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf
i. all analyses or tests and results of analyses of the excavated area after the soil was removed from the Property; and	Soil confirmation sampling occurred in 2009/2010 at the west equipment storage yard in association with soil removal from stained areas with elevated concentrations of petroleum hydrocarbons; see the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.	See Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf
j. all persons, including contractors, with information about (a) through (i) of this request.	The 2009/2010 deconstruction and excavation activities were conducted by Baseline Construction, Inc. The 2009/2010 soil and sediment sampling activities were conducted by URS Corporation.	
67. Was there ever a spill, leak, release or discharge of a hazardous substance, waste, or material into the Willamette River from any equipment, structure, or activity occurring on, over, or adjacent to the river? If the answer to the preceding question is anything but an unqualified "no", identify:	In May 2010, a soil erosion assessment was conducted to evaluate the potential for soil to erode from the developed portion of Harborton Substation to the undeveloped portions, and subsequently to the Willamette River. The stormwater and soil erosion analysis concluded that soil erosion appears to be an ongoing but very minor process within the Harborton Substation and that the transport of soils via stormwater from the developed portions of Harborton Substation are unlikely to affect either the adjacent wetland areas or the Willamette River. For further details, see Appendix E of the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15, as well as the response to Question 13i.	See Question 15 Attachments Q15_2009-2010 Activity Summary Report.pdf
a. the nature of the hazardous substance, waste, or material spilled, leaked, released or discharged;		
b. the dates of each such occurrence;		
c. the amount and location of such release;		

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<p>d. were sheens on the river created by the release;</p> <p>e. was there ever a need to remove or dredge any solid waste, bulk product, or other material from the river as a result of the release? If so, please provide information and description of when such removal/dredging occurred, why, and where the removed/dredged materials were disposed.</p>		
<p>68. For any releases or threatened releases of PCB(s), identify the date, quantity, location and type of PCB(s) or PCB(s) containing materials or liquids, and the nature of any response to or cleanup of the release.</p>	<p>Associated with the Generating Plant were two PCB-containing 85 MVA step-up transformers, three PCB-containing 250 KVA Fuel Pumping Station transformers, and PCB-containing turbine surge suppressors. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know the concentrations of PCBs in the oil for these transformers or surge suppressors. The step-up transformers were present at Harborton from 1973 until they were sold in 1987, the fuel pumping station transformers were present at Harborton from approximately 1973 until at least 1985, and the surge suppressors were present from 1973 until they were disposed of in 1986. To the best of PGE's knowledge, after reasonable inquiry, there were no releases or threatened releases of PCBs from these transformers. For further details on these transformers, see the response to Question 21a.</p> <p>See the documents (Q21a_1984-12-17 Oil Equip Invent List.pdf and Q21a_2009_Stored Oil Filled Equipment.pdf) attached in response to Question 21a, which describe PGE's operational and stored oil-filled equipment at Harborton Substations in 1985, 1986, 2007 and 2009.</p> <ul style="list-style-type: none"> August 25, 1994 — Mineral oil from a skid-mounted tank spilled near AST #2 across an area of 38 feet by 26 feet. The soil was analyzed for TPH; see the document (Q15_1996-01-23 Soil Data.pdf) attached in response to Question 15. Several options for cleaning up the soil were evaluated; however, PGE decided to leave the soil in place because the mineral oil was below expected oil cleanup standards (Oregon Generic Remedy; < 10,000 ppm). Subsequently, any of this soil with petroleum hydrocarbon concentrations greater than 1,000 ppm would have been removed during the 1999-2002 voluntary cleanup activities, as further described below. December 4, 1997 —Oil samples from both tanks were tested and had concentrations of 1 ppm PCBs; see the document (Q62_1997-12-08 PGE emails on Cable Crossing.pdf) attached in response to Question 62. <p>The document (Q62_1997-12-4 Cable Crossing Photos.pdf) attached in response to Question 62 provides photographs taken on December 4, 1997 of the area. The</p>	<p>See Question 15 Attachment Q15_2009-2010 Activity Summary Report.pdf</p> <p>Also see Question 19 Attachments Q19_2000-07-20 SPCC.pdf</p> <p>Also see Question 21 Attachments Q21a_2009_Deconstruction Waste Summary.pdf Q21a_2009_Deconstruction Orders and Disposals.pdf Q21a_1984-12-17 Oil Equip Invent List.pdf</p> <p>Also see Question 52 Attachment Q52_2009_Hillsboro LF Waste Permit.pdf</p> <p>Also see Question 62 Attachments Q62_1996-06-13 AST Spill at Storage Yard.pdf Q62_1996-12-26 AST Spill at Storage Yard.pdf Q62_1997-12-03 PGE emails on Cable Crossing.pdf Q62_1997-12-04 Cable Crossing Photos.pdf Q62_1997-12-08 PGE emails on Cable Crossing.pdf Q62_1997-12-18 PGE emails on Cable Crossing.pdf Q62_012109_Harborton.pdf Q62_080309_Harborton.pdf Q62_120809_Harborton.pdf</p>

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	<p>document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 includes a sketch of the spill, as well as information that oil was also spilled over time at the foot of the transmission tower (within a fenced off area). Please note that although the document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 is dated December 3, 1997; to the best of PGE's knowledge, after reasonable inquiry, this is in error and the spill occurred on December 4, 1997.</p> <p>PGE evaluated the possibility of removing the entire cable (see the document, Q62_1997-12-18 PGE emails on Cable Crossing.pdf, attached in response to Question 62), but instead abandoned the submerged cable in place and removed the entire surface structure including the oil reservoirs.</p> <ul style="list-style-type: none"> January 21, 2009 – Pieces of equipment including four transformers (containing PCB containing oil ranging from less than 0.5 to 30.70 mg/L PCBs) and an oil tank (presumed less than 1.0 mg/L) leaked approximately 10 gallons of oil, spilling on an estimated area of 70 square feet of soil. The spill was reported to the EM&C, contained and cleaned up, including the removal of 5 cubic feet of soil. See Q62_012109_Harborton.pdf. August 3, 2009 – A transformer spilled approximately 5 gallons of transformer oil onto a gravel area estimating 50 square feet. The spill was reported to EM&C, contained and cleaned up, including soil removal and surface washing. The transformer PCB content sticker showed less than 1 mg/L. See Q62_080309_Harborton.pdf. <p>December 8, 2009 – Fuel oil spilled when removing a tank and spilled approximately 15 gallons of oil onto an estimated area of 20 square feet. The spill was contained inside the tank area. PGE does not know the PCB content of the oil. See Q62_120809_Harborton.pdf.</p> <ul style="list-style-type: none"> 2009/2010 – In conjunction with the removal of the oil-filled equipment from the east and west equipment storage yards, soil samples were collected and analyzed for PCBs and petroleum hydrocarbons to determine if spills or releases had occurred from the storage of oil-filled surplus equipment. In the east equipment storage yard, PCBs and petroleum hydrocarbons were detected at concentrations below applicable screening criteria; therefore, no further evaluation or remediation was performed. In the west equipment storage yard, PCBs were detected at concentrations below applicable screening criteria, while petroleum hydrocarbons were detected at concentrations exceeding 500 mg/kg. Because the sampling identified several areas within the west equipment storage yard with petroleum hydrocarbon-impacted soil, PGE elected to complete limited source removal actions (excavation and off-site disposal). On 2 December 2009, soil was 	

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	<p>excavated from seven stained areas. Approximately one load of soil, as well as general deconstruction debris, were disposed of at the Hillsboro Landfill; see the documents (Q21a_2009_Deconstruction Waste Summary.pdf and Q21a_2009_Deconstruction Orders and Disposals.pdf) attached in response to Question 21, the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15, and the document (Q52_2009_Hillsboro LF Waste Permit.pdf) attached in response to Question 52. On 27 July 2010 a total of 10 cubic yards of additional material was excavated in the vicinity of two of the previous excavations. Confirmation sampling was conducted to confirm removal of petroleum contaminated material. The locations of the confirmation samples (and thus the general locations of the excavated areas) are shown in Figure 5 of the 2009-2010 Activity Summary Report (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15.</p>	
<p>69 For any releases or threatened releases of PCB s and or PCB s containing materials or liquids identify and provide copies of any documents regarding the quantity and type of waste generated as a result of the release or threatened release the disposition of the waste provide any reports or records relating to the release or threatened release the response or cleanup and any records relating to any enforcement proceeding relating to the release or threatened release Provide all documentation regarding but not limited to the following releases:</p>		
<p>e. a December 4, 1997 release of 40 gallons of cable oil onto the ground following vandalism at the Harborton substation.</p>	<p>Oil samples from both tanks were tested and had concentrations of 1 ppm PCBs; see the document (Q62_1997-12-08 PGE emails on Cable Crossing.pdf) attached in response to Question 62.</p> <p>The document (Q62_1997-12-4 Cable Crossing Photos.pdf) attached in response to Question 62 provides photographs taken on December 4, 1997 of the area. The document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 includes a sketch of the spill, as well as information that oil was also spilled over time at the foot of the transmission tower (within a fenced off area). Please note that although the document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 is dated December 3, 1997; to the best of PGE's knowledge, after reasonable inquiry, this is in error and the spill</p>	<p>Also see Question 62 Attachment Q62_1997-12-05_Spill Report.pdf Q62_2000-02-04 Email about a Dec 1997 spill.pdf Q62_1997-12-08 PGE emails on Cable Crossing.pdf Q62_1997-12-4 Cable Crossing Photos.pdf Q62_1997-12-03 PGE emails on Cable Crossing.pdf Q62_1997-12-18 PGE emails on Cable Crossing.pdf</p>

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	<p>occurred on December 4, 1997.</p> <p>PGE evaluated the possibility of removing the entire cable (see the document, Q62_1997-12-18 PGE emails on Cable Crossing.pdf, attached in response to Question 62), but instead abandoned the submerged cable in place and removed the entire surface structure including the oil reservoirs.</p>	
Section 7.0 - Property Investigations		
<p>70. Provide information and documentation concerning all inspections, evaluations, safety audits, correspondence and any other documents associated with the conditions, practices, and/or procedures at the Property concerning insurance issues or insurance coverage matters.</p>	<p>In 1979, loss prevention inspections were conducted by Arkwright-Boston Insurance and Industrial Risk Insurers for the Harborton generating plant and AST area, respectively.</p>	<p>Question 70 Attachments Q70_1979-03-06 Loss Prevention Report.pdf Q70_1979-04-17 Loss Prevention Survey.pdf</p>
<p>71. Describe the purpose for, the date of initiation and completion, and the results of any investigations of soil, water (ground or surface), sediment, geology, and hydrology or air quality on or about each Property. Provide copies of all data, reports, and other documents that were generated by you or a consultant, or a federal or state regulatory agency related to the investigations that are described.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the reports, information, or data PGE has related to soil, water (ground and surface), or air quality and geology/hydrogeology at the Harborton Substation (Parcel A) and Parcel B:</p> <ul style="list-style-type: none"> In July 1971, Dames & Moore completed a soil characterization/classification investigation for River dredging, evaluating the suitability of the river dredge material for use as site fill; see the documents (Q15_1971-07-01 D&M Dredge Soils Report.pdf and Q15_1971-12-03 D&M River Dredge Borings.pdf) attached in response to Question 15. To the best of PGE's knowledge, after reasonable inquiry, the dredge material was not analyzed for contamination prior to placement at the site. In October 1971, PGE completed an environmental statement report on the Harborton and Bethal Generating Facilities; see the document (Q15_1971-10-06 PGE Env Statement.pdf) attached in response to Question 15. The report assessed the potential environmental impact of the then proposed generating plants. Between 1972 and 1976, Dames & Moore completed several soil investigations to determine the appropriate locations for structural foundations (e.g. ASTs, turbines, switchyard, etc.) in conjunction with the initial development/construction of the Harborton Substation; see the documents (Q15_1972-03-01 D&M Foundation Report.pdf, Q15_1972-09-01 D&M Found Lab Test Report.pdf, Q15_1972-10-27 D&M Piling Inspec Report.pdf, and Q15_1973-08-03 D&M AST Soil Test Report.pdf. In 1972, Turbo Power & Marine Systems (TPM) completed a study of diffusion of 	<p>See Question 15 Attachments <u>Reports</u> Q15_1971-07-01 D&M Dredge Soils Report.pdf Q15_1971-10-06 PGE Env Statement.pdf Q15_1971-12-03 D&M River Dredge Borings.pdf Q15_1972-03-01 D&M Foundation Report.pdf Q15_1972-07-27 TPM Modeled Exhaust Study.pdf Q15_1972-07 PGE Theoretical Plume Rise.pdf Q15_1972-09-01 D&M Found Lab Test Report.pdf Q15_1972-10-27 D&M Piling Inspec Report.pdf Q15_1973-08-03 D&M AST Soil Test Report.pdf Q15_1974-03-05 Odell Exhaust Test Report.pdf Q15_1974-11-11 Odell Emissions Test Error.pdf Q15_1974-12-03 Odell Air Quality Impact Rprt.pdf Q15_1974-03-04 Odell bill of materials.pdf Q15_1974-07-01 TPM Install Test Unit 1.pdf Q15_1974-07-01 TPM Install Test Unit 2.pdf Q15_1974-07-01 TPM Install Test Unit 3.pdf Q15_1974-07-01 TPM Install Test Unit 4.pdf Q15_1975-02-19 Ebasco Tank Settlement.pdf Q15_1975 Mar-Jul 1976 SA Air Quality Tracer.pdf Q15_2009-2010 Activity Summary Report.pdf Q15_2006-09-12_Soil Sampling Summary.pdf Q15_2007-08-24_Soil Sampling Summary.pdf</p>

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	<p>exhaust emissions (modeled) for the Harborton Generating Plant; see the document (Q15_1972-07-27 TPM Modeled Exhaust Study.pdf) attached in response to Question 15.</p> <ul style="list-style-type: none"> In 1972, PGE completed a theoretical (modeled) plume rise and diffusion study for the Harborton Generating Plant; see the document (Q15_1972-07 PGE Theoretical Plume Rise.pdf) attached in response to Question 15. In 1974, TPM conducted installation testing for performance and exhaust smoke on the two dual ("Twin Pacs") turbines, each of which utilized two Pratt & Whitney Aircraft gas turbine engines (units 1 through 4); see the documents (Q15_1974-07-01 TPM Install Test Unit 1.pdf, Q15_1974-07-01 TPM Install Test Unit 2.pdf, Q15_1974-07-01 TPM Install Test Unit 3.pdf, and Q15_1974-07-01 TPM Install Test Unit 4.pdf) attached in response to Question 15. Between 1974 and 1976, Glen Odell (on behalf of PGE) completed exhaust testing and air quality impact investigations; see the documents (Q15_1974-03-05 Odell Exhaust Test Report.pdf, Q15_1974-11-11 Odell Emissions Test Error.pdf, Q15_1974-03-04 Odell bill of materials.pdf, Q15_1974-12-03 Odell Air Quality Impact Rprt.pdf, and Q15_Odell 1976 Air Quality Report.pdf) attached in response to Question 15. In 1975, Ebasco Services Inc. completed a soil settlement report for the ASTs; see the document (Q15_1975-02-19 Ebasco Tank Settlement.pdf) attached in response to Question 15. In 1975, Science Applications completed an air quality tracer study for the Harborton Generating Facility; see the document (Q15_1975 Mar-Jul 1976 SA Air Quality Tracer.pdf) attached in response to Question 51. In late 2009, surface soil samples were collected from the east and west equipment storage yards and analyzed for PCBs and petroleum hydrocarbons. In the east equipment storage yard, PCBs and petroleum hydrocarbons were detected at concentrations below applicable screening criteria; therefore, no further evaluation or remediation was performed. In the west equipment storage yard, PCBs were detected at concentrations below applicable screening criteria, while petroleum hydrocarbons were detected at concentrations exceeding 500 mg/kg and exceeding applicable screening criteria. Soils with concentrations of petroleum hydrocarbons exceeding 500 mg/kg were excavated and disposed of at the Hillsboro Landfill. For further details, see the attached document (Q15_2009-2010 Activity Summary Report.pdf). In late 2009 and early 2010, surface soil samples were collected from the perimeter of the developed portion of the Harborton Substation (Parcel A) and the cable terminus area (Parcel C). In Parcel A perimeter soil and Parcel C soil, PCBs and 	<p>Q15_2007-10-07_Soil Samp at Pole Strg Yard.pdf</p> <p><u>Raw Data</u></p> <p>Q15_1971-11-16 PGE Ambient Data.pdf Q15_1972-11-29 PGE Ambient Data - Interim.pdf Q15_1972-08-10 Soil Resistivity Test.pdf Q15_1972-11-10 TPM Sound Pressure Levels.pdf Q15_1974-01-08 PGE Prelm Sound Levels.pdf Q15_1974-01-14 PGE Add Prelm Sound Levels.pdf Q15_1974-01-25 PGE Noise Levels at Sauvie.pdf Q15_1974-02-19 PGE Emission Status.pdf Q15_1974-04-15 PGE Sound Pressure Data.pdf Q15_1975_Dec PGE Turbine Emiss Units 1-4.pdf Q15_1975_Feb PGE Turbine Emiss Units 1-4.pdf Q15_1975_Nov PGE Turbine Emiss Units 1-4.pdf Q15_1975_Oct PGE Turbine Emiss Units 1-4.pdf Q15_1975_Sept PGE Turbine Emiss Units 1-4.pdf Q15_1976_April-Sept PGE Turb Emiss Units 1-4.pdf Q15_1976_Jan PGE Turbine Emissions Units 1-4.pdf Q15_1976_Sept-Dec PGE Turb Emiss Units 1-4.pdf Q15_1979_Dec PGE Turbine Emiss Units 1-4.pdf Q15_1983-03-01 Turbine Noise Emissions.pdf Q15_1994-03-23 Soil Data.pdf Q15_1995-10-06 Soil Data.pdf Q15_1995-12-05 Soil Data.pdf Q15_1996-01-23 Soil Data.pdf Q15_1997-02-27 Soil Data.pdf Q15_1998-08-27 Water Data.pdf Q15_2000-10-11_DEQ Split Sample.pdf Q15_2002-03-01 Data.pdf Q15_2002-03-01 GW Data.pdf Q15_2002-04-11 Soil Data.pdf Q15_2006-09-12 Soil Data.pdf Q15_2007-08-24 Soil Data.pdf</p> <p><u>Other Documents</u></p> <p>Q15_1974-03-04 Smoke Spot Exceed Permit.pdf Q15_1975-11-12 Meredith-PGE Noise Letter.pdf Q15_Harborton Sediment Chemicals.pdf Q15_2010-08-06_Parcel F East Cable Terminus Photos.pdf Q15_2009_Deconstruction Photos.pdf Q15_2010-06-15_Sampling Photos.pdf Q15_2010-06-18_Sampling Photos.pdf</p>

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	<p>petroleum hydrocarbons were detected at concentrations less than applicable screening criteria. The perimeter soil samples had a few locations exceeding screening criteria for PAHs. For further details, see Appendix E of the attached document (Q15_2009-2010 Activity Summary Report.pdf).</p> <ul style="list-style-type: none"> In late 2009 and early 2010, sediment samples were collected from the mouth of the culverts draining the former AST area and pump station and from within the swale/stream adjacent to the southern boundary of the developed portion of Harborton Substation (Parcel A). Sediment samples did not exceed screening criteria for petroleum hydrocarbons. PCBs were only detected at two locations, at the mouth of the former pump station culvert and at the mouth of the Willamette River. Since none of the intervening samples within the swale/stream detected PCBs, it is highly unlikely that PCBs are being transported from the developed portion of the Harborton Substation to the Willamette River. Because PAHs were detected with no discernable pattern and detected upstream of the site's discharge points into the swale/stream, some, or all, PAHs within the swale/stream may be attributable to a source other than Harborton Substation. For further details, see Appendix E of the attached document (Q15_2009-2010 Activity Summary Report.pdf). In May 2010, a soil erosion assessment was conducted to evaluate the potential for soil to erode from the developed portion of Harborton Substation to the undeveloped portions, and subsequently to the Willamette River. The stormwater and soil erosion analysis concluded that soil erosion appears to be an ongoing but very minor process within the Harborton Substation and that the transport of soils via stormwater from the developed portions of Harborton Substation are unlikely to reach either the wetland areas adjacent to the Parcel A or the Willamette River. For further details, see Appendix E of the attached document (Q15_2009-2010 Activity Summary Report.pdf), as well as the response to Question 13i. A site visit was conducted at the Harborton east submersible cable terminus (Parcel F) on August 6, 2010; the map and photographs from that site visit are shown in the attached document (Q15_2010-08-06_Parcel F East Cable Terminus Photos.pdf) <p>Photographs taken during the 2009/2010 Harborton Substation (Parcel A) deconstruction activities and site sampling activities (Parcels A and C) are attached (Q15_2009_Deconstruction Photos.pdf, Q15_2010-06-15_Sampling Photos.pdf, Q15_2010-06-18_Sampling Photos.pdf, Q15_2010-07-19_Sampling Photos.pdf, and Q15_2010-07-26 Sampling and Site Photos.pdf).</p> <p>Additional soil, water, and air quality (noise and emissions) data not already included in the reports are attached in response to Question 15. Also attached in response to Question 15 are two documents (Q15_1974-03-04 Smoke Spot Exceed Permit.pdf and Q15_1975-11-12 Meredith-PGE Noise Letter.pdf) related to data, but that do not actually contain data. In addition, a document with a table comparing the Portland Harbor sediment concentrations (unknown date) adjacent to Harborton Substation to a 1973 USGS study is attached in response</p>	<p>Q15_2010-07-19_Sampling Photos.pdf Q15_2010-07-26 Sampling and Site Photos.pdf</p> <p>Also see Question 19 Attachments Q19_1985-10-09 SPCC.pdf Q19_1986-10-17 SPCC.pdf Q19_1996-03-05 SPCC.pdf Question 19 Attachment Q19_2010_Harborton SPCC.pdf</p> <p>Also see Question 50 Attachments Q50_DEQ Staff Report for 1973 Public Hearing.pdf Q50_PUC Study 1977.pdf Q50_Special Report_The Harborton Issue 1977.pdf Q50_1979 DEQ on Harborton Turbines.pdf Q50_2005-12-06 DEQ to Norton.pdf Q50_2004-05-18 EPA Agrees to Upland Source Control.pdf Q50_1974 DEQ Correspondances.pdf</p> <p>Also see all Question 62 Attachments</p>

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	<p>to Question 15; see the document (Q15_Harborton Sediment Chemicals.pdf) attached in response to Question 15. Some of the agency correspondences contain air quality data or refer to air quality data that are no longer attached with the correspondence; see the document (Q50_1974 DEQ Correspondances.pdf) attached in response to Question 50.</p> <p>The SPCC Plan Q19_2010_Harborton SPCC.pdf, attached in response to Question 19, briefly discuss/show topography and/or soil condition at the Harborton Substation (Parcel A).</p>	
<p>e. a December 4, 1997 release of 40 gallons of cable oil onto the ground following vandalism at the Harborton substation.</p>	<p>Oil samples from both tanks were tested and had concentrations of 1 ppm PCBs; see the document (Q62_1997-12-08 PGE emails on Cable Crossing.pdf) attached in response to Question 62.</p> <p>The document (Q62_1997-12-4 Cable Crossing Photos.pdf) attached in response to Question 62 provides photographs taken on December 4, 1997 of the area. The document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 includes a sketch of the spill, as well as information that oil was also spilled over time at the foot of the transmission tower (within a fenced off area). Please note that although the document (Q62_1997-12-03 PGE emails on Cable Crossing.pdf) attached in response to Question 62 is dated December 3, 1997; to the best of PGE's knowledge, after reasonable inquiry, this is in error and the spill occurred on December 4, 1997.</p> <p>PGE evaluated the possibility of removing the entire cable (see the document, Q62_1997-12-18 PGE emails on Cable Crossing.pdf, attached in response to Question 62), but instead abandoned the submerged cable in place and removed the entire surface structure including the oil reservoirs.</p>	
<p>72. Describe any remediation or response actions you or your agents or consultants have ever taken on each Property either voluntarily or as required by any state or federal agency. If not otherwise already provided under this Information Request, provide copies of all investigations, risk assessments or risk evaluations, feasibility studies, alternatives analysis, implementation plans, decision documents, monitoring plans, maintenance plans, completion reports, or other document concerning remediation or response actions taken on each Property.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the known remedial activities at the site:</p> <ul style="list-style-type: none"> In late 2009, surface soil samples were collected from the East and west equipment storage yards and analyzed for PCBs and petroleum hydrocarbons. In the east equipment storage yard, PCBs and petroleum hydrocarbons were detected at concentrations below applicable screening criteria; therefore, no further evaluation or remediation was performed. In the west equipment storage yard, PCBs were detected at concentrations below applicable screening criteria; while petroleum hydrocarbons were detected at concentrations exceeding 500 mg/kg. Soils with concentrations of petroleum hydrocarbons exceeding 500 mg/kg were excavated and disposed of at the Hillsboro Landfill. For further details, see the document (Q15_2009-2010 Activity Summary Report.pdf) attached in response to Question 15. 	

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Section 9.0 - Compliance With This Request		
79. Describe all sources reviewed or consulted in responding to this request, including, but not limited to:		
a. the name and current job title of all individuals consulted;	Chip Bloomer – Environmental Engineer	
c. the date consulted.	Work on this information request was performed from February 2008 through June 2012.	
80. If not already provided, identify and provide a last known address or phone number for all persons, including Respondent's current and former employees or agents, other than attorneys, who have knowledge or information about the generation, use, purchase, storage, disposal, placement, or other handling of hazardous materials at, or transportation of hazardous substances, waste, or materials to or from each Property identified in response to Question 4.	Harborton Substation is currently an unmanned substation, requiring only periodic maintenance and monthly inspections. See the responses and documents for Questions 40.	Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers revised.pdf